FORMAT OF THE EXAMINATION

Long questions:

Choose 2 of three Study Units 1 and 2 Study Units 2 and 3 Study Units 1, 4 and 5	2 x 25	=	50
Multiple choice 25 x 2	25 x 2	=	50

The left hand paragraph reference is to the Study Guide.
The second paragraph reference is to the textbook; Page references are listed with chapter heading.
"Sentences in italics and quotes under paragraph headings reflect stated study guide requirements."
References (AR) refer to the Tutor.

1.1 1.1 Definition of the Financial System SG p11 VZ p1

A set of conventions surrounding the lending and borrowing of funds by nonfinancial units, and the intermediation of this function by financial institutions

- to facilitate the transfer of funds;
- to create additional money when required and
- to create markets in debt instruments so that the price and allocation of funds are determined efficiently

1.2 Six elements characterise the financial system VZ p3

1. Lenders and borrowers (Surplus and deficit units)
2. Financial intermediaries
3. Financial instruments
4. The creation of money
5. Financial markets
6. The price of money, interest rate

Ultimate lenders and ultimate borrowers comprise the same four categories:

1. Households
   Individuals / families / charitable, religious and non profit making bodies, unincorporated business e.g. farmers, retailers, partnerships, since the transactions of these businesses cannot be separated from those of their owners
2. Firms
   Corporate sector comprising all companies not classified as financial institutions; business enterprises engaged in the production and distribution of goods and services
3. Government
   Central, provincial, local government
4. Foreign Sector
   All organizations, persons and assets resident in the rest of the world.

Direct financing takes place where no intermediary is involved in a financial transaction, however a broker may be involved, e.g. an underwriting house in selling corporate bonds to raise cash, is a facilitator not an intermediary

Indirect financing takes place where an intermediary matches a borrower with a lender, thus satisfying both parties. His fee is the difference or **margin** between the two.

Direct securities are financial instruments sold for the first time
Secondary securities are those which have been sold at least once and are re-sold

Primary securities represent a financial transaction/obligation between an intermediary and a borrower
Indirect securities represent a financial transaction/obligation between a lender and an intermediary

Direct financing is when a deficit economic unit (borrower) issues financial instruments and sells these to the surplus units in the economy
Indirect financing is when an intermediary concludes a transaction between a borrower and a lender

NonReversible instruments must be held until their expiry date and may not be re-sold, like Insurance policies, mortgage bonds
Reversible or **Negotiable** instruments may be sold as required, e.g. shares

A Treasury Bill is a short-term paper with a term of 3 months
The Treasury (Government) may use this instrument to raise short-term money to relieve cashflow shortfalls caused by the fact that its expenses are monthly but its income is annual or twice annually, or monthly in the case of VAT (but not enough to cover the salary bill). Treasury bills are marketable.

A spot transaction is one which will be fully executed (i.e. bought and paid for) within four days.
Over-the-counter (OTC) transactions are **informal**.
The **JSE** is primarily a secondary market since most shares traded are being traded **not for the first time.**
SARB debentures are money market instruments in that they enable the control of the money supply. However, the way the money supply is controlled nowadays is through the interest rate, which is raised when there is too much liquidity, in order to curb credit and spending, and dropped when spending is to be encouraged, by making it cheaper to borrow.

1.2 9.6 Financial investment is investment in financial instruments in either primary or secondary markets.
Real investment is investment in capital goods, machinery, plant, etc.

The return is the earnings on financial investment:
This can be either

(a) **income yield**: the income component of the return, normally a payment of cash. This cash is either an **interest payment** or a **dividend payment.**

(b) **capital gain:** This is the difference between the price when bought and the price realized when sold. Capital gain or loss is generally caused by an interest rate change in the market.

Proper measurement of return on an investment should include both the yield and the capital gain (or loss).

9.6 NonDiversifiable and diversifiable risk of investments:
SG p15 VZ p219-220
NonDiversifiable:

i. Interest rate risk: changes in market interest rates, e.g. inverse relationship between interest rates and bond rates
ii. Inflation risk: influences interest rates

iii. Bull-Bear market risk: market forces
iv. Country or Political risk:
International, e.g. Zimbabwe
Domestic, changes in legislation, taxes, **fiscal policy**
v. Industry risk: e.g. the clothing industry in Cape Town when Chinese imports have prevailed at much lower prices

Diversifiable:

i. Management risk: the harm managers can cause, risk aversion, risk seeking
ii. Default risk: changes in creditworthiness of a firm in which you may have invested
iii. Liquidity risk: e.g. price discounting or heavy commissions to promote aggressive selling
iv. Callability risk: e.g. where bonds are called in due to drop in interest rate
v. Convertibility risk: e.g. where the investment may be changed from that which is in the investor's best interest

1.3 9.5 Financing a deficit SG p15 VZ p215-217

a. Loan from bank
b. Loan from micro lender
c. Funds from investor

Debt financing
Equity financing
Important to find the balance of the above which results in the lowest cost of capital, or weighted average cost of capital **WACC.**
Example of WACC calculations SG p216:

Debt finance 10%:	After-tax cost if 9.94%
Equity finance 90%:	Required rate of return on equity is 16%

10% x 9.94	= 0,994
90% x 16% return	= 14.400
Total	= 15,395

The lower the required rate of return, the higher should be the value of the firm.

A firm may need to raise money from time to time for such items as

- replacement of assets (plant, machinery, etc.)
- expansion in the form of growth or acquisition
- renewal of assets
- R&D of new products

Debt financing can be in the form of **mortgage bonds, bonds, debentures.**
The amount of debt finance borrowed is called **the principal**. This must be paid back to the lenders and the debt must be **serviced through regular interest payments.**

Mortgage bonds finance real estate and repayments take place monthly, being an amount of capital repayment and an interest payment which is calculated on the outstanding balance of the loan.
Bonds are used to finance capital spending (plant and equipment) where these assets become security against the loan.
Debentures may be used to finance any asset or operational need and no specific assets serve as collateral.
Bonds and debentures pay interest (normally six monthly) during the life of the loan and the principal is paid at maturity.
Equity financing is available indefinitely since the amount of capital originally raised when the shares were first sold remains in the firm. There is no obligation to pay dividends which are only paid if the firm has adequate earnings after tax. Dividend payments are not subject to tax since the firm has already been taxed. Shares are subject to capital gains/loss when sold.
Generally **debt financing** is between 0 – 40% of the finance to be raised.
Debt-equity ratio or **Financial leverage** or **gearing** refers to the proportion of debt to equity. A high gearing would be where more than 40% of required financing is raised through debt financing.
The higher the financial leverage (gearing) (debt-equity ratio), the greater the financial risk exposure of the firm; the greater the risk that the firm might not be able to pay its required commitments. Example in tutorial: Pyramid schemes or "get rich quick" schemes where the interest cannot be serviced if more investors do not get involved.

1.4 1.2.2 Financial intermediaries SG p17 VZ p4-p12 Section 1.2,2 / 1.2.3 / 1.2.4 / 1.2.6

Financial intermediaries facilitate the flow of funds from surplus to deficit economic units, from lenders to borrowers.
Banks also create money when required:
Banks are required by law to hold a minimum of a 2.5% reserve with the Central Bank to cover the loans they have issued, which obviously fluctuates with the changes in loans. The reserve percentage may change if the Central Bank dictates, thus decreasing the money supply.
The familiar transmission mechanism occurs when the Central Bank provides reserves on loan to banks at the repo or Repurchase rate. This influences the bank-to-bank interbank market, in turn eventually interest rates at which Banks generally lend money.

Financial intermediaries in South Africa exist because of conflict between lender and borrower requirements in terms of size, term, quality and liquidity. They issue financial liabilities or **claims** on themselves (indirect securities) to pass money on to borrowers (primary securities).
Banks create money by **first** acquiring financial claims, thereby increasing the financial liabilities in the system.

Classification of financial intermediaries: VZ p7

Deposit intermediaries
SARB
Private sector banks

NonDeposit intermediaries
Long term insurers, short term insurers
Pension and provident funds
Public investment commissioners PICs
Portfolio institutions
Development Finance intermediaries
Quasi financial intermediaries
Micro lenders
Investment Trusts
Stokvels

Intermediation functions in brief VZ p9
Monetary banking sector (SARB, Land Bank, private Banks, mutual Banks, PostBank)
Custodian of the country's money stock
Keeper of government's surplus balances
Provide loans to public and corporate sectors
Purchase government sector debt
Creation of money
Definition of M3:

	NFA	Net Foreign Assets
+	NCG	Net claims on Govt sector
+	CPS	Credit to private sector
+	NOA	Net other Assets

DCE	Domestic Credit Expansion	
=	NCG	Net claims on Govt sector
+	CPS	Credit to private sector

Thus M3 = NFA + DCE + NOA

1.4 1.2.2 Role of financial intermediaries SG p17 VZ p4

Role of monetary policy
Intermediation function of financial intermediaries
Non intermediation functions of financial intermediaries VZ Section 1.2.3
Classification of the different financial institutions

We must be able to classify the following financial institutions:

Deposit intermediaries
SARB
Private sector banks
NonDeposit intermediaries
Long term insurers, short term insurers
Pension and provident funds
Public investment commissioners PICs
Portfolio institutions
Development Finance intermediaries

Roles played by the different financial institutions in the economy
VZ Section 1.2.4

VZ Section 1.2.5 Read

1.2.6 Other financial bodies playing part in the economy, exchanges

- BESA where Govt and Corporate bonds are trade
- JSE where equities are traded
- SAFEX where futures are traded

1.5 1.3 Financial Instruments SG p19 VZ p14 – 18

There are two broad categories of financial instruments, equities (shares) and debt instruments

A financial claim (financial instrument): A claim against a person or institution for payment of a future sum of money and/or a periodic payment of money.

1. **Equities/shares**
2. **Debt instruments** time period / maturity
   See Treasury Bills, Bonds ...

Reversible, non reversible instruments
Primary securities issued by ultimate borrower
Indirect securities issued by intermediaries

Definition of Derivatives

Derivatives are financial instruments which are derived from debt and equity instruments, i.e. they cannot exist on their own.

There are derivatives for the following markets:

Money market
Bond market
Equity market
Forex market
Commodities market

1.6 1.4 Financial markets VZ p19

An efficient market has the following characteristics: (VZ 8.2.3 p196)

- Information re prices and volume is accurate and available timeously
- Assets are liquid, can be bought and sold quickly at prices close to previous transaction prices provided that the information has not changed
- Low transaction costs prevail, including brokerage, transfer, etc.
- Prices respond quickly to new information.

Financial market is a term which encompasses the participants and their dealings in particular financial claims, groups of claims and equities, and the manner in which their demands

and requirements interact to set prices for such claims (interest rates), and prices of equities.

The economic function of financial markets is to provide channels for transferring the excess funds of surplus units (lenders) to deficit units (borrowers). Financial markets are the link between surplus and deficit units.

The participants in financial markets are the borrowers, the lenders, financial intermediaries (buyers and issuers of securities), brokers, fund managers, speculators, exchanges, regulators.

Primary market is the market for the issue of new securities.
Secondary market is the market where previously issued claims are traded.
Brokers act on behalf of other participants, their principals, in return for a commission, or act on behalf of themselves.
Market makers are financial intermediaries (mainly banks) who have assumed or are appointed by issuers to perform the function.

Active secondary markets are important for the following reasons:

(i) Assists primary market by providing investors with the assurance that they will be able to sell their securities if required
(ii) Provides the basis for determination of rates to be offered on new issues
(iii) It rapidly registers changing market conditions, indicating the receptiveness of the market for new primary issues
(iv) Enables investors to make rapid adjustments to their portfolios in terms of risk, size, return, liquidity and maturity.
(v) Enables the central bank to buy and sell securities in order to influence liquidity in the financial markets (open market operations).

Short-term securities are traded on the money market, with a life span of less than a year
Capital market instruments have a life span of more than a year when they are issued, include Bonds and Shares and are traded in the capital market. Shares do not normally have an expiry date.

The debt markets – also called **fixed-interest markets** for obvious reasons, is usually split into
The **Bond market**, where long-term securities (term to maturity is more than one year) are issued and traded
and
The **Money market,** where short-term securities (less than a year) are issued and traded. The money market **also encompasses interbank market operations and significant operations of the SARB.**
SARB performs **open market operations** to establish a desired **money market shortage** which it then provides **via the interbank market** at the **SARB accommodation rate** or **repo rate**, resulting in **a powerful influence (control)** on the **short-term interest rate**.

Money market interest rates are the foundation of rates and prices **in all other markets** including the derivatives markets.

1.4.4 Allied markets VZ 1.4.4 p22

(i) **Forex market** is strictly speaking not a financial market. However it has a borrowing and a lending dimension and is closely allied to the domestic financial market. The forex market in SA is OTC (over the counter, non regulated).

(ii) **Commodities markets** The spot commodities market is not a financial market and relates to large volume items like maize and wheat. Allied to it is a significant derivatives market, e.g agricultural futures and options. This market is regulated by the Agricultural Commodities division of the JSE thus bringing the commodities market closer to being a financial market.

See diagram of all markets VZ p 23.

1.4.7 Derivatives markets VZ 1.4.6

Spot transaction – up to four days for full execution
Forward transaction – priced at spot price plus cost of money to the end of the term
Derivative market – market is derived from some other market, e.g. the forward market is derived from the spot market, so are other money market derivatives such as repos, forward rate agreements caps, floors.
Option is the right without obligation to buy or sell an asset at a fixed price during a specified period. This is derived from the underlying asset.
Futures contract is a contract to buy or sell a determined quantity and quality of an asset on a particular date at a price to be determined at the time of negotiation of the contract. This is derived from the underlying asset.
A repo (repurchase agreement) is the sale of a previously issued security at an agreed rate of interest for a specific period of time. The rate is derived from the price of money for the period of the repo.
An interest rate swap entails the swap of interest obligations between two parties, i.e. to swap a fixed for a floating rate of interest in the same currency in respect of a mutually agreed notional amount.
A forward rate agreement enables users to fix a rate on a deposit or notional loan which starts at some time in the future, similar to a currency forward contract where the exchange rate for a future date is determined upfront.
A cap establishes a ceiling on interest rates but retains a benefit if the rate falls.
A floor determines a bottom rate up front, retaining a rate to profit if the rate rises.

To hedge risk means that others take on the risk, risk is transferred from the hedger to the speculator.

1.4.7 Financial exchanges VZ

Formal exchanges include the JSE which supervise the trading of spot equities, (Equities Div) financial futures and options (Financial

Derivatives Div), commodity futures and options (Commodities Div), and BESA which supervises the trading of spot bonds.

1.7 5.1 Financial regulation VZ p124

5.1.1 Regulation is necessary because market imperfections occasionally arise. Regulatory authorities are created and authorized to influence the economy in line with Government policy, in other words Governments seek to control what happens so that its own outcomes are pursued.
Not all sections of the financial markets are regulated. Some are SROs, self regulating organizations.

5.2.2 **Objectives of regulation VZ p126**

(i) Protecting consumers and investors
(ii) Ensuring solvency and financial soundness of financial institutions
(iii) Promoting fairness, efficiency and transparency in securities markets
(iv) Promoting a stable financial system

5.3 **Overview of regulatory framework VZ p131**

2.1 How do Banks operate?

"Be able to explain why banks are unique amongst financial institutions and how they create money out of thin air."

Banks have unique ability to acquire financial claims first and thereby increase the financial liabilities in the system, i.e. To create money out of thin air.

This sets Banks apart from other financial institutions.

Money supply (AR)

M1 = Cash (coins, notes) + deposits
M2 = M1 + short-term deposits
M3 = M2 + long-term deposits
M3 is the most comprehensive money stock

Statutory reserve requirements for banks:

2,5% cash reserve

To provide for cash withdrawals, not high (consider your own financial transactions)

The 2.5% is deposited with the SARB and does not earn interest

5% of its liabilities in prescribed liquid assets

The bank pays interest on its liabilities and must earn interest if possible on available cash:
- Lend the cash to borrowers who pay interest
- Buy financial instruments, interest bearing

Refer to the balance sheets progression pages 27/28/29

Money creation:

Remember that deposits form part of the M1 money supply (which is included in M2 and also in M3).

To provide a loan of R1, the bank creates a deposit for R1. Since deposits have increased (this can be at any bank, or even if the deposit is taken out in cash), the money supply **has increased by R1m.**

When deposits increase, the reserve requirement needs to increase as well.

(AR) Intermediation: Borrowers get direct access to lenders and intermediation is no longer so strong in this regard. There are specialist institutions for working capital, etc. Role of bank as intermediary between lender and borrower has deteriorated. Bank's focus has changed from intermediation to provider of financial services. Interest income has dramatically decreased (p71) (the margin) in favour of fee income.
(AR) Check p69 for a picture of the bank's position.

2.2 Banks : Their Functions

"Make sure you can define a bank and briefly explain which variables affect the lending rates of banks."

3.1 Definition VZ p68

A Bank is a depository financial institution that accepts deposits and channels the money into lending activities.

3.1 Which variables affect the lending rates of Banks: VZ p68

In a free market economy the supply and demand for funds will determine the price, the level of interest rates which are also influenced by the monetary stance of the central bank.
Thus if the levels of savings is high relative to the level of investment, the interest rate will decline and vice versa. The extent of the shift between high and low interest rates will be determined by monetary policy.

3.2 Factors which have affected the banking industry in recent years, and the reaction of the banks. VZ p69

"Understand what factors have affected the banking industry in recent years and how banks have reacted to them. Make sure you can explain:

Disintermediation and how banks reacted to it

Disintermediation refers to the undermining of the competitive position of banks both on the deposit and lending side of banking business. Companies have more access to more diverse finance and funding, resulting in their being less dependent on banks for direct finance. Banks have sought to develop specialist advisory, structuring and underwriting skills to expand their talents.

Changes in the structure of personal savings and the reaction

Personal savings with banks have been affected in recent history due to the vast array of hedge instruments chosen by investors over the old-fashioned fixed deposit with a bank.
The banks have countered with an aggressive entry into the securities markets to offer a full range of alternatives in order to keep the business they would otherwise have lost.

Entry of foreign banks

Wholesale banks (investment banks) rely on large corporates and financial institutions for funds, and are being threatened by the entry of foreign banks into their arena.

Entry of non-financial retailers and micro lenders

Nonfinancial retailers have come up with financial products such as Pick n Pay's "Go Banking" and, more recently, other retailers offering Unit Trusts at their till points. **Micro lenders**.

The more important role of fee (i.e. non-interest) income"

The increased competition over the past few years has resulted in lower interest rate margins less of the Banks' income earned in **interest** and more of it in **fees,** resulting in a lower risk profile for Banks.

Banks are the custodians of the country's money stock
Banks must meet minimum financial requirements in order to meet obligations
Capital adequacy rules
Statutory minimum cash reserves
Other financial intermediaries do not have to comply with the above phenomenon and it has been argued that this handicaps the Banks' ability to compete with them.

3.3.1 Commercial Banking VZ p 72

"Study 3.3.1 and ensure you can list and briefly describe the functions of a commercial bank."

Commercial Banking is the conduct of a banking business of which a significant part consists of the acceptance of money deposits withdrawable by cheque, order, draft or ATM, and these funds in turn being made available as loanable funds.

Functions of a commercial bank VZ p73

Accept deposits, notably cheque deposits

Banks accept deposits to fund the loans they make.
Demand deposits are withdrawable any time, without notice.
Notice, term and savings deposits also fall within **deposits**.
Deposits appear as Liabilities on the balance sheet.

Make credit available

Credit issued flows back to the banking system as money.
Excess reserves may be used to cover new credits extended **to the extent of the multiplier arrived at from the cash reserves requirement**. This is the **creation of money** concept.
e.g. a 32,5% reserve requirement on a deposit of R10m allows creation of R30m if all the R10m is used as that reserve.

As a result of the ability to create money, banks influence macroeconomic variables such as private consumption expenditure, private investment, rate of inflation, balance of payments position. The SARB seeks to control growth in the money supply by using the interest rate as its operational variable of monetary policy. Its accommodation facilities exert influence over interest rates.

Handle payments and collections by using the SARB clearing system **SAMOS**

Banks ending up in deficit at the end of the day's transaction clearing can finance their deficit in a number of ways
- Via interbank settlements
- Draw on their account at SARB
- Repurchase agreement with SARB

Banks make payments for their clients by means of the money transmission service:
(**AR Know** the difference between Stop order and Debit order)

- Standing orders, Stop order
- Direct debits, Debit order
- Domestic and foreign travellers' cheques
- Credit card facilities
- Electronic funds transfers

Provide financial services

Service fees are generated from running cheque accounts and transferring money.

ATMs / Safe Deposits / Share and fixed interest stock trading

Cash management services for corporate clients

Authorised Dealers in Foreign Exchange

Role in capital markets and risk management facilities

Assist in implementation of monetary policy

Change in accommodation rate (adjustment to repo rate) leads to changes in other rates of interest and give indications to the market of the current policy stance of the monetary authorities.

3.3.2 Functions of investment banks VZ p75

"Study 3.3.2 and ensure you can list and briefly discuss the functions of investment banks. After 3.3.1 and 3.3.2 you should be able to distinguish between commercial and investment banks on the basis of their functions and who their major clients are."

Functions of investment banks: Planning and raising of finance, private banking, investment advice, portfolio and asset management, placing of securities, securities trading. Taking equity stakes in partnership with management of medium to large unlisted companies.

Provide Corporate finance

Corporate structuring, restructuring, merger and acquisition activities, arrange and manage debt and equity issues and underwriting and project finance. Management buy-outs.

Underwriting by investment banks

(a) guarantees a sale of new issue shares and pick up what is not sold,

or

(b) buy all shares and broker them out and make a profit

Corporate lending

Acceptance of short and medium term wholesale deposits and the provision of short and medium term credit to public and corporate sector, including small business areas. Overlaps with commercial banking.

Money and capital markets

Investment and trading in money and capital market securities

Placement of municipal and public corporation issues

Investment management

Portfolios of pension funds, other institutions, high net worth clients

Running unit trusts and hedge funds

Settlement and custody of securities, which earn fees

Derivative markets

Undertake trading and hedging on behalf of clients and for their own account in future, options and swap markets

Stockbroking services

Investment banks are members of the JSE

Operate stockbroking firms to provide execution facilities

International services

Making markets in financial assets

Property investments

3.3.3 Other types of Bank

Land Bank

PostBank

2.3 3.5 Regulation of banks

"Be able to explain why bank regulation is necessary."

3.5.1 The need for bank regulation VZ p84

(AR Banks are leveraged institutions, i.e. their debt/equity ratio is high. See p87 re requirements iro capital, cash and liquid assets. See capital requirements. See risk weighting, off balance items e.g. goodwill.)

Bank operations are risky because

1. A Bank's capital represents only a small percentage of outstanding loans and therefore a limited ability to absorb losses
2. Capital ratios declined over time, which is why there is a statutory minimum in place
3. Banks borrow short and lend long, creating a serious liquidity risk if there should be a sudden general withdrawal of large deposits, etc.
4. Banks sometimes lend too enthusiastically, make bad lending decisions
5. Banks' business is accepting and managing risk. Financial markets have evolved rapidly over time and banks have to embrace new activities to compete for and retain clients.

3.5.2 The South African Banks Act VZ p85 (AR, read)

"Be able to explain the most important risks faced by banks."

This Act regulates Banks and extends to all areas of deposit taking business unless specifically exempted. The Act emphasizes risk management more than previously. Checks are in place which were devised in consultation with the Banks.

Major risks are:

1. Business risk from changes in volumes, margins, costs resulting from changes in general business conditions
2. Credit risk arises from changes in the value of assets and off-balance sheet exposures due to volatile rates or credit qualities. Credit risk is also the failure of a borrower to meet its contractual obligations.
3. Liquidity risk where operations might not be fundable or where financial commitments might not be able to be met timeously or cost effectively

(AR "banks hold a portfolio of liquid assets ..." - p87 lists

liquid assets: Gold coin and bullion, clearing account balances with SARB, Treasury Bills issued by Govt, SARB securities, short-term Land Bank bills, Govt bonds)

4. Market risk where changes in e.g. interest and exchange rates have a negative impact on the Bank.
5. Operational risk is direct loss due to inadequate or failed internal processes, people and systems
6. Political risk is any adverse effect of political changes in a country reflected on Bank operations. E.g. South Africa 1985 experienced large scale capital flight resulting in imposition of exchange controls
7. Reputation risk, where a real or imagined perception of improper conduct by a Bank can damage its reputation, with serious consequences
8. Systemic risk, where the whole financial system is threatened by the failure of one institution.

3.5.3 Prudential requirements VZ p87

Capital requirements

- The **higher** of (a) R250m or (b) 10% of the Bank's risk-weighted assets and off-balance sheet activities, calculated per asset or activity as

  10% * risk weight * average daily amount of asset/activity in that month

  In addition, the composition should be as follows:

  50% Tier one (primary) share capital and unimpaired reserve funds

  50% Tier two (secondary) share capital and unimpaired reserve funds

Liquid asset requirements

- **minimum** 5% of the average daily amount of total liabilities to the public, with a minimum of 75% of the average daily amount of liquid assets to be held. The daily liquid asset holdings have to average to a minimum of 100% of the required holdings for the month.
- Liquid assets include

  Gold coin and bullion
  Clearing account balances with the SARB
  Treasury Bills
  SARB Securities
  Short-term Land Bank Bills
  Government bonds

Cash reserve

- **minimum** 2.5% of total liabilities to be held in non-interest-bearing account with the SARB

Large credit exposures

- Bank's Board of Directors are required to give specific consent for any exposure over 10% of the Bank's capital and reserves.
- A transaction giving exposure over 25% of the Bank's capital and reserves to any private sector non-bank person must be reported to the Registrar of Banks **and constitutes an impairment to capital** to the extent of the amount in excess of 25% of capital

- Any other transaction e.g. to other banks, giving exposure over 25% must be reported to the Registrar

3.5.4 FICA 2001 VZ p88

"Know how FICA influences banks."
FICA came into being to combat money laundering
Financial institutions are required to
- KYC know your client, verify clients' identities
- Maintain transaction records
- Report suspicious transactions
- Train staff to be alert to such transactions

3.5.5 FAIS Act 2002 VZ p89

"Know how FAIS influences banks."
To protect clients against improper conduct of FSPs
FSPs are licensed and authorized through a government appointed regulator, the FSB
Basic principles must be adhered to
- Adequate disclosure of **relevant material information** to client
- Disclosure of actual and potential **own interests** to client
- Adequate **record keeping**
- Avoidance of **fraudulent and misleading advertising**
- Proper **safekeeping, separation, protection of client funds and transaction documents**
- Suitable and adequate **guarantees, professional indemnity or fidelity insurance cover**

3.5.6 Other relevant legislation VZ p89

"*Note the Acts mentioned in this section.*"
- Companies Act 1973
- Currency and Exchange Act 1933
- Usury Act 1968
- Credit Agreements Act 1980

3.5.7 National Credit Bill VZ p90

"*Note the NCB, possible mc questions.*"
Proposes to consolidate all existing legislation and to introduce a single National Credit Regulator to administer and regulate the national credit industry.
Its approach is (a) to protect consumers from moneylenders and (b) to make credit available to the poor.
Issues that it addresses are
- Consumer education
- Disclosure, transparency on pricing, interest rates, charges, garnishment
- The Bill attempts to control interest rates, sparking debate re price control

3.6 Asset and liability structure and management VZ p92

"Be able to discuss asset and liability management in relation to a bank."
(AR see p92

(**Bank assets:**	**Liabilities**
(Cash	Call deposits
(Overdrafts)	Current accounts
(Gen Advances) 40%	Savings and Transmission accts
(Mortgage Adv 30%	Forex department
(	NCD
(	Fixed deposits
(	

((a) The bank must not run a liquidity risk
((b) The bank must earn maximum income
(Must keep expenses low as possible, income as high as possible)

Banks tend to enjoy more short term flexibility in handling their liabilities compared to their assets, many of which comprise relatively illiquid and long term loans. Net interest income is maximized by funding the assets with relatively short term funds if interest rates are declining and with longer term funds if interest rates are rising.

Banks fund themselves by accepting deposits, e.g. call deposits, most of which mature on demand.

Maturity mismatches in a Bank's assets and liabilities will result in a surplus or deficit (short-funded) of funds at any time. Very few banks experience a match between the two. In a surplus situation the Bank should lend its excess funds to the general market, in a deficit situation the bank has to borrow funds from the general market.

Management of the liquidity position involves assessing future differences between assets and liabilities.

Controlling the liquidity risk implies smoothing maturities of liabilities so that a concentration of maturing liabilities is avoided.

Pool of funds model allows all a Bank's liabilities to be grouped together and the funds distributed from the pool to each business unit requiring funds.

2.4 The Role of the SARB

2.4.1 Introduction

"Make sure you know the current mission of the SARB and how it has changed in recent years."

2.1 Introduction VZ p32

The primary objective of the SARB was previously to protect the internal and external value of the currency in the interest of balanced and sustainable growth. Since 1994 the primary objective was enshrined in the Constitution as the protection of the value of the currency in the interest of balanced and sustainable economic growth in the Republic. With the omission of the "internal and external" value of the currency the focus was shifted on the quest for **domestic price stability**.
*Note that the objective **has changed** from internal and external (inflation and exchange rate) to mainly internal (inflation rate).*

2.1.1 Independence VZ p33

***"**Study, making sure you understand on what matters the SARB can take decisions independently and what its relationship with the government entails."*
The independence and autonomy of the SARB are entrenched in the Constitution. The SARB is accountable to Parliament.
The inflation target is set by government in consultation with the SARB but the instruments deployed to achieve the target are decided by the SARB. The Bank determines the official interest rate, the repo rate.
(AR) Note the independence, p33 "The bank has been given autonomy …" and close cooperation between Treasury (fiscal policy) and SARB (monetary policy). Certain actions on the monetary front have implications for the fiscal front e.g. repo rate increase. If there is a fiscal deficit the Treasury turns to the SARB for help.
Macroeconomic objectives: VZ p 34 para 2
Curbing information / promote employment / healthy balance of payments / Equitable distribution of wealth

2.4.2 Functions of the SARB

"Make sure you are able to list the four basic functions."

2.2.2 Overview of the functions of the Reserve Bank VZ p37

Monetary policy:
Formulates and implements monetary policy so that the primary goal of the SARB will be achieved in the interest of the whole community it serves
Integrity of banking system:
Ensures that the SA money, banking and financial system is sound, meets the requirements of the community and keeps abreast of international developments
Macroeconomic functions:
Assists the SA government as well as other members of the Southern African economic community **in** the formulation and implementation of macroeconomic policy
Information functions:

Informs the SA community and all interested stakeholders abroad about monetary policy specifically and the SA economic situation in general.

In addition, the SARB is **custodian of foreign reserves of SA** and **manages its subsidiaries** the Bank Note Company, the SA Mint, the Corporation for Public Deposits

2.1.2 Role in the Financial System VZ p34

"Price stability depends *inter alia* on financial stability."
- **Bank supervision** ensures prudential soundness in the banking system
- **Lender-of-last-resort assistance** is provided to banks to safeguard the banking system from systemic risks where a threat of failure would pose a serious risk to the financial system as a whole
- **Clearance and settlement of bank claims** so that payment for transactions are not encumbered
- the SARB has a vested interest in the **development and functioning** of the money, capital and forex markets if it wants to maintain financial stability

2.5 Maintaining financial stability VZ p39

Banks offer fairly homogeneous products to customers and are therefore collectively exposed to the same risk. Bank supervision of individual banks ensures that banks comply with certain minimum financial disciplines. Collectively, banks are rapidly affected by events such as changes in monetary policy.

Financial stability VZ p40

Broadly, the financial system's ability to
- facilitate an efficient allocation of economic resource and the effectiveness of other economic processes such as wealth accumulation, economic growth, social prosperity
- to assess, price, allocate and manage financial risks
- to maintain ability to perform these key functions through self-corrective mechanisms even when affected by external shocks or by a buildup of imbalances

"You have to be able to write a paragraph on the role of the SARB in maintaining financial stability."
(AR) **A paragraph is 15 lines**

Central Banks collect, analyse and publish information about their banking systems; they must know their banking systems and markets. They follow market practices and trends to make rapid judgments in fast-moving situations. They ensure that contingencies are in place to deal with problems. They investigate emerging risks and alert participants. They push banks to implement standards in their practices.

2.5.1 Bank supervision VZ p39

"You have to be able to describe bank supervision."
Objectives: To foster an efficient and resilient system of financial

intermediaries. To limit the risk that depositors will suffer losses, to maintain the confidence of the general public in banks. Problems occurring in one bank can have wider systemic effects on other parts of the system.

The SARB works very closely with the private banks to ensure that

- Banks have adequate capital provided by shareholders
(AR) gearing, debt ratio
- Banks apply efficient risk management procedures to themselves
- The Boards, auditors and top management of banks all share in the responsibilities of the banks
- Banks cooperate with the SARB in the implementation of monetary policy and in achieving the objectives of monetary policy
(AR) Monetary policy is the manipulation of the money supply at present through the repo rate. In addition the SARB has the ability to increase or decrease any liquidity deficit/surplus in the monetary sector by selling instruments like government bonds. They need the cooperation of the banks for this and the willingness of the banks to take up such offers.

Maintaining bank solvency is a key element and much effort is spent in appraising asset quality, management and market risk.
Attention to policy statements, regulatory guidelines, capital adequacy, earnings strength, liquidity, sensitivity to market risk, management's ability to identify, measure, monitor and control price risk, are all factors examined in the process.

2.5.2 National payments system NPS VZ p41

"You have to understand and be able to describe the national payments system."
"Make sure you can distinguish between a net and a gross system and that you know which system is in use by the SARB. (Study the first 4 paragraphs of 2.5.3.")
Clearance and settlement are effected by the SARB.
Central Banks play an important role in

- Clearing payment instruments
- Providing adequate supply of currency thus inspiring confidence in the currency so that business is not hampered or curtailed. This might result in unemployment, a decline in both capital investment and the country's rate of economic growth.

The differences between various banks after each day's clearing by transfers are settled by cheques issued by a bank owing money to another being drawn on the owing bank's SARB account.
A **net system** is one where transactions are effecting during the day but at the end of the settlement period (e.g. daily) the obligations are netted and settled with a single transfer of funds.
A **gross system** is one where each transaction undertaken is settled individually and immediately.

South Africa uses a combination of the two.
Implications:
The process of netting significantly reduces the total amount transferred and the number of payment transactions, lowering operating costs and liquidity requirements.
The system of clearing and settlement enables the SARB to test the degree of liquidity in the banking system, which must be known from day to day.

The South African Multiple Option Settlement SAMOS provides various options for final and irrevocable settlement. **SAMOS is a gross system, instant.** For smaller transactions, SA uses the net system. Where the values are very high, SAMOS is used. SAMOS is administered by the SARB.

(AR) The national payments system is the clearing of cheques between the various banks. See para 2 of 2,5,3.
Also be aware of SAMOS which is an automatic system introduced in 1998, realtime settlement between banks, is guaranteed, all the commercial banks are part of SAMOS.
Understand figure T8 SG p33 where the clearing account shows a deficit.

2.6 Implementing Monetary Policy VZ p42

"You must be able to discuss each of the blocks in figure 2.2 of the prescribed book, as explained in section 2.6."
"You should be able to explain repurchase transactions as monetary policy instruments and also the transmission mechanism of monetary policy." See SG p36.
The **money market deficit** is the sum of all the bank deficits added together. A bank can fund its deficit by

(a) borrowing from another bank (interbank lending), in which case the first bank's deficit does **not** contribute to money market deficit because it is offset by the surplus of the lending bank; or
(b) by borrowing from the SARB through the SARB's **accommodation policy**, the most important of money market instruments. It refers to the interest rate at which the SARB will provide commercial banks with loans to finance the money market deficit.

When the SARB increases the repo rate to combat rising inflation, commercial banks in turn increase their interest rates on their loans, increasing the price of bank credit. Consumption generally decreases when interest rates increase and investment may also decrease. These two decreases lower demand and should suppress price increases and thus lower the inflation rate.

What is crucial for the implementation of monetary policy is the combination of the Central Bank monopoly power over the supply of reserves and its ability to impose terms and conditions related to the

surplus or deficit of reserves.

The transmission mechanism for monetary policy links central bank actions to spending and inflation. Its initial step is the effect of Central Bank actions on short-term interest rates. Other interest rates and the exchange rate are affected, and these in turn affect spending and inflation. Crucial to the implementation of monetary policy is the Central Bank's monopoly power over the supply of reserves and its ability to impose conditions related to the excess or shortfall of reserves.

The SARB's refinancing system is the principal mechanism used for implementing monetary policy, the way the Bank provides liquidity to banks enabling them to meet their daily liquidity requirements to settle interbank transactions, over and above the minimum statutory level of reserves required to be held. (2.5% + 5%)

To maintain effectiveness of the repo rate, the Central Bank has to compel the banks to borrow from itself, intervening regularly in the money market to create a shortage by draining excess liquidity from the money market, and refinancing the shortage at the repo rate.

Banks apply for refinancing at weekly auctions of repos with 7 day maturities. Refinance on a daily basis is available to square off the commercial banks' positions at the end of the day.

The Central Bank's repo rate influences interest rates charged by banks, the general level of interest rates in the economy, and through the monetary transmission mechanism other economic aggregates like the money supply, bank credit extension, aggregate demand and the rate of inflation.

The repo rate influences market rates by influencing directly the banks' marginal cost of funding and by reflecting the Central Bank's stance of monetary policy.

Study VZ p44 fig 2.2

2.4 Inflation targeting VZ p38

"Make sure you understand how the target is currently specified."
The targeted index is the CPIX in metropolitan and other urban areas, chosen because it is readily understood by the public. The target is specified as a continuous target of 3 to 6 percent for the period after 2006. This must be obtained continuously in every month measured over a twelve-month period in future years.

2.2.1 Monetary Policy Committee VZ p35

"Study section 2.2.1 so that you understand which factors the Monetary Policy Committee takes into account when deciding on changes in the repo rate. You should be able to write a paragraph on this."
Monetary policy stance is based on decisions taken by the Monetary

Policy Committee at meetings which take place six times a year.

The Monetary Policy Committee bases its decision relative to the monetary policy stance on a detailed assessment of all the factors affecting inflation, based on past experience.

A large number of indicators are monitored:
- Growth in money supply and bank credit extension
- Changes in nominal and real salaries and wages, labour productivity, nominal labour costs
- the gap between potential and actual domestic output
- developments in final demand
- balance of payments situation and the exchange rate
- short-term and long-term interest rate changes
- the yield curve
- government finances
- producer and imported prices

and exogenous factors
- global growth and inflation
- international interest rates
- international commodity prices
- oil prices
- domestic and international agricultural conditions
- administered prices

The SARB is expected to inform the public of any exogenous shock, its potential impact on inflation, the monetary policy response to be taken, and the time frame in which inflation is expected to return to the target frame.

2.6.1 Bank Reserves VZ p45

"Make sure you understand why banks keep reserves and how the Central Bank can use open market operations to manage the size of the money market deficit."
"Make sure you understand how the SARB's selling or buying of financial instruments influences the money market deficit."
Bank reserves are the banks' holdings of deposits in accounts with the Central Bank (which do not earn interest) plus vault cash held by banks.
Reserves comprise
Required reserves – per statutory requirements
Excess reserves – to provide for funds which may be needed in clearing and settling payment
Because these reserves do not attract interest, banks seek to keep their holdings to a minimum

2.6.2 Cash reserve requirements VZ P45

The classic reserve requirement system influences the money supply through changes in the interest rate, the refinancing system policy playing

a decisive role.

2.6.3 Liquidity management

The Central Bank regulates the supply of bank reserves in order to achieve its interest rate of quantitative objectives. There are two aspects:

(i) how to balance the liquidity position, balance supply with demand

(ii) how to reinforce the influence that liquidity adjustments may have on interest rates through signalling mechanisms between market participants

The operations of a Central Bank in the money market to influence liquidity comprise liquidity providing or liquidity draining open market operations. Open market operations are the Central Bank's transactions in the financial markets to provide or drain liquidity.

Open market operations : Four main types :

(i) issue debentures
(ii) longer-term reverse repos
(iii) Forex swap transactions: swap R for US$to drain liquidity
(iv) Sales of bonds

Open market purchases of securities are made explicitly to provide liquidity to the domestic banking system; open market sales to drain liquidity, aimed at creating a shortage of cash reserves in the banking system so that banks are forced to use refinancing with the SARB.

Open market operations are flexible monetary policy instruments and involvement by institutions is voluntary.
Open market operations can be performed frequently and in any quantity. For these reasons they are suited to fostering financial competition and market development.

Open market operations can be performed in the primary market (new issues of short-term government or Central Bank debentures) or in secondary markets, which operations include collateralized lending, outright transactions in suitable assets, repos using securities, and forex swaps.

Purchases or sales of securities by the Central Bank tend to directly and immediately increase or decrease the quantity of money in circulation and the cash reserves of the commercial banks. This change in the supply of bank cash and thus in the credit-creating ability of the commercial banks tends to increase or decrease the quantity of money, while change in the quantity of money tend to produce changes in credit conditions and interest rates, in turn affecting the level of overall economic activity in an economy.

Open market operations represent a direct and comprehensive instrument for credit control, provided there are broad and active markets in the short-term and long-term securities in which the Central Bank wishes to deal, and that such securities constitute a sufficiently sensitive

and decisive part of the whole credit structure.

2.7 Government services

"You have to be able to write a short paragraph on the services provided to government by the SARB."
"You only have to read 2.7.1 very quickly to know why governments hold accounts with central banks."
"You have to know which accounts government keeps with the SARB."
"You should understand how transfers between tax and loan accounts and the government accounts with the SARB might influence the money market deficit."

2.7.1 Government banking accounts with the SARB

The Central Bank performs for government the same functions that a commercial bank provides for its clients. In recent years however the number of accounts held with the SARB of this nature has decreased in line with the downgrading of general banking business by the SARB. This was brought about by the expenses incurred in running such accounts, its lack of profitability, and the ability of the commercial banks to offer better facilities in this regard.
Government accounts held with commercial banks are called **tax and loan accounts.**

Customs and excise account
The SARB runs this account for all members of the SACU, a common customs area, which enjoys no restrictions on quantity and uniform excise duty. The revenue is pooled in a common revenue account and distributed according to a formula.

Exchequer and Paymaster-General's account
These are the most important, being the biggest in terms of value.
Exchequer accounts are mainly for inflows of funds.
Paymaster General accounts are to meet expenses.

Adminstration costs
To a large extent the duties performed by the SARB for government are free of charge, offset by the fact that the balances held for government do not earn interest.

Reasons government keeps accounts with Central Banks
"This is important."
(i) More convenient and economical for government to centralize its operations in accounts held at the Central Bank
(ii) Preferable because of intimate relationship between fiscal and monetary affairs; the government in any country is the largest revenue gatherer and the biggest borrower, and plays a crucial part in the economic life of a nation.
(iii) Central Bank is responsible for influencing monetary conditions in the economy and carrying out monetary policy. As the financial activities of government can disturb money market conditions and exchange rates and even undermine the monetary policies of the Central Bank, the

centralization of government accounts with the Central Bank at least gives the Central Bank a better chance of judging the general financial situation at any one time, offering advice to the government and taking steps to ensure that government actions do not unduly disturb monetary conditions.

2.7.2 Privatisation of government accounts:

"You have to be able to discuss the advantages of privatization of government accounts."

Tax and loan accounts

Government accounts are kept with the four main commercial banks. Large movements in government cash flows confused the signals in the system, complicated the Central Bank's open market operations, and created volatility in interest rates which made it more difficult to predict the best time to raise funds for government.

Tax and loan accounts eliminate these problems. Flows are retained within the private sector and causing minimal disruption to the money market. Government earns interest on its deposits with banks. Monetary policy signals are easier to read by market participants.

2.7.3 The role of a Central Bank as agent and adviser to Government VZ p51

"From Section 2.7.3 you only have to know that the SARB manages the issue of Treasury bills for the government."

- (no longer in SA) Management of national debt; handling new issue of government bonds (terminated in 1998 in SA)
- Issue of Treasury bills through the weekly Treasurer bill tender
- (not in SA) Registrar of Government bonds as well as those issued by nationalized industries

- Reserve Bank management of Government borrowings
- Money market : Treasury bill tenders
- Capital market : Government bonds

2.7.4 Foreign Exchange Services

"From 2.7.4 you should know that the SARB provides foreign exchange to the government when it needs it and buys the foreign exchange when the government has a surplus."

Provide government with foreign exchange required to service and meet foreign debt, or buying surplus foreign exchange which may accrue to the government.

2.7.5 Public Debt management services

Changes in the size, composition by type of security, maturity structure and ownership of the outstanding debt of the public sector, and more particularly the outstanding debt of the central government. New borrowing operations undertaken by the government sector and the way in which budget deficits are financed. Public Debt management is actually the responsibility of the Treasury but the two institutions consult

and cooperate with each other.

2.7.6 Administration of Exchange control

"Make sure you understand the role of the Exchange Control Department of the SARB."

The Exchange Control Department of the SARB is responsible for day-to-day administration of exchange control. Banks are given the right to act as authorized dealers in foreign exchange. Exchange control policy is determined by the Minister of Finance so the SARB is merely an adviser to the Minister.

2.8 The Corporation for Public Deposits

"Study only the first 2 paras of 2.8. You should know that the CPD is a subsidiary of the SARB and be able to define the role of the CPD."

The CPD accepts short-term demand deposits from the public sector or other approved by the Minister of Finance, paying interest on them.
The CPD is a wholly owned subsidiary of the SARB.
Cash flows of the CPD have a direct impact on money market liquidity.
The SARB thus manages both the deposits and investments of the CPD.
The CPD was established to rationalize the investment of short-term public sector funds and to enable the monetary authorities to control the investmentment of these funds more efficiently.
Public deposits are amounts of money held on behalf of central or provincial government or any body, council, fund or account established by the government and which by law is or may be required to invest its funds with the CPD.

Public Ivestment Commissioners PIC
A body managing the pension funds of the public sector.

2.9 Custodian of foreign reserves

"You should be able to describe the role of the SARB as custodian of foreign reserves. You should be able to:
Define foreign reserves:
Official foreign reserves are external assets readily available to and controlled by monetary authorities for direct financing of external payment imbalances, for indirectly regulating the magnitudes of such imbalances through intervention in markets to affect the currency exchange rate, and/or for other purposes.
(AR) Study pages 56 – 60, know it well

2.9.1 Objectives of foreign reserve management VZ p57

List the general objectives of managing foreign reserves
(AR) Be able to list the 4 items:

- To secure appropriate level of international liquidity
- To alter composition of total reserves in terms of monetary policy objectives and market trends
- Application of risk management procedures to safeguard the country's reserves and to minimize risks related to the country's reserves
- Opportunity cost analysis of foreign reserves. In this regard the

lowering of funding costs is important. Investment decisions of foreign reserves and therefore return aspects also have an impact on opportunity costs.

2.9.2 Reserve management in the SARB

- Main parties responsible for management of foreign debt
- Development of reserves management function
- SARB's approach to reserve management
- Composition and magnitude of SARB foreign reserves
- Trading in forex and gold markets

Describe in what forms the foreign reserves are held (2.9.2, para 2)

Foreign exchange reserves consist of current and call accounts with foreign financial institutions and investments in foreign assets e.g. US Treasury Bills.

Discuss the objectives of foreign reserve management in the SARB (p58 para 2)

- Setting the investment objectives
- Establishing the investment policy
- Selecting a portfolio strategy
- Selecting assets
- Measuring and evaluating performance

Explain the two tranches of foreign reserves (p58 para 3)

Foreign investments are divided into two tranches, the investment tranche and the liquidity tranche. The investment tranche invests in higher-yielding assets while the liquidity tranche fulfils the SARB's obligations in foreign currency liquidity e.g. payment of foreign facilities. The tranches are further divided into portfolios, some managed in-house and others by external fund managers.

Describe what factors influence the size of a country's foreign reserve portfolio in general and in South Africa in particular (p59 "Composition and magnitude", para 2 and 3)

The optimum size of the reserves has two main elements:

(i) to identify correctly the uses of the reserves and therefore the minimum required to meet the identified needs

(ii) a correct analysis of the cost of funding reserves. The debate over limiting the growth of the reserves will be easier to conduct if the effective cost of reserves accumulation is determined.

The combination of the above two elements provides a **lower limit** for a country's foreign reserves. It is not possible to identify the precise level as the process is not exact. Most countries prefer to have a **buffer** above the minimum foreign reserve level. The SARB does not have a specific target

for its foreign reserve level but increasing the gross level is a key objective.

Explain how foreign assets and liabilities are valued and how gains and losses are treated (p59 "Composition and magnitude", para 4 and 5)

Foreign exchange assets and liabilities are normally valued **at current market exchange rates** but are often subject to the overriding principle of valuation at lower market prices.

Some Central Banks bring realized and unrealized foreign exchange gains and losses to the profits and loss account without special treatment. Other Central Banks place foreign exchange revaluation gains in reserves or in a revaluation account. **The Reserve Bank is one of these.**

In the case of gold reserves, some Central Bank value gold on the basis of the prevailing market price, but many countries simply ignore changes in the market price of gold by utilizing a historical price set in a foreign country. This practice has sometimes created large hidden reserves that become tempting targets for finance ministries.

Briefly describe the composition of the foreign reserves of the SARB (p59 "Composition and magnitude", para 6)

The SARB holds international currencies in its portolio of foreign exchange reserves, these balances being held mainly in various (nostro) (?What is nostro) accounts and in current and /or call accounts in the various international centres. The SARB also holds international **liquid assets** e.g. US Treasury Bills. The US$ component of the portfolio is dominant but the Reserve Bank also has other major international currencies in the portfolio.

Explain how the SARB can utilize the financial market to increase the return on the holdings of gold and foreign exchange (p61 "Trading in the foreign exchange and gold markets")

Central Banks can use financial markets to strengthen their position in terms of holdings of gold and foreign exchange. Naturally they need to be aware of the risks.

The SARB trades in three markets: spot, forward and swap foreign exchange markets. Currency options are also used for reserve management purposes but no Rand options are transaction by the SARB. The Bank is **not active** in the currency futures market.

2.10 Balance sheet analysis of the monetary banking system

Liabilities

"You must understand the items on the asset and liability sides of the monetary sector's balance sheet. You will not be expected to list assets or liabilities but you must know which side any item will appear. You need to be able to use a balance sheet to calculate the changes in M3 and to indicate the ex post statistical causes of such a change in the money supply."

(AR) Work through SG p29 and VZ p62, see also SG p63

A Capital and Reserves

Shareholders' capital + Statutory reserve fund

B Notes and Coin

Total number of notes outside the monetary sector.
Vault cash is excluded

C Deposits (i) Private Sector

Private sector deposits with monetary sector.
Excludes foreign and government deposits.
Includes public enterprises/corporations /local authorities

(ii) Government Deposits

Central and Provincial Government deposits
Includes Public Investment Corporation
Excludes Public enterprises/corporations /local authorities
Includes all transfers to Stabilisation Fund
Includes deposits of the IMF with the SARB arising from drawings on the super reserve or reserve tranche

D Foreign liabilities

Foreign loans and accounts related to gold reserves
All deposits of and loans from nonresidents and nonresident banks with monetary institutions

E Other liabilities

Credits in transit
Income accounts for interest and discounts received
Provision for taxation
Notes of other banks for which the bank has assumed liability
Liabilities iro derivative instruments

Assets

F Gold and foreign assets

Gold holdings of the SARB
Forex assets of the Bank
Call deposits
All foreign assets of banks
Treasury Bills held in other governments
Gilt-edged securities of foreign governments

G Claims on Government

Total claims of the SARB, the CPD and other public sector monetary institutions

H Credit to private sector

Credit extended to private sector (a) mortgage advances and (b) other loans and advances including overdraft facilities

I Other assets

Balances on a large number of accounts
Other securities e.g. those issued by the SARB and Land Bank debenture

(AR) Expect similar questions in the Exam to the assignments

2.10 DO Question 7 of the review questions VZ p65 SG p48/49

3.1 The Financial Services Board

regulates the largest part of the formal financial sector.
The most important industries regulated by the FSB are

- short-term and long-term insurers
- pension and provident funds
- investment institutions

We will also look at the activities of the microfinance industry which provides financial services

5.4 Financial Services Board FSB VZ p132

Is responsible for **non banking** activities
"Study Section 5.4 and make sure that you can discuss the role of the FSB in the SA economy."
"You also need to know the duties of each of the different departments."
The FSB's **mission** is to ensure the fair treatment of both users and providers of financial products and services in South Africa.
The FSB's **functions** are:

(i) to ensure that laws regulating financial institutions and the provision of financial services are complied with
(ii) to advise the Minister on matters concerning financial institutions and financial services
(iii) to promote consumer education by financial institutions and bodies in the financial services industry

FSB decisions may be appealed against decisions of the Registrar, by lodging an appeal with the Appeal Board.

The FSB works within a framework of departments corresponding broadly to the various regulated industries, each with its own legislation.

5.4.1 Departments of the FSB

Financial Advisory and Intermediaries Department

- rules of market conduct for consumer protection, affecting investment managers and advisers, insurance agents and brokers, foreign exchange intermediaries, financial planners and advisers.
- intermediaries previously members of an Exchange are not covered by this Act but by the Securities Services Act.

No financial adviser or other intermediary may conduct business without having been registered and approved by the FSB, whose website carries a list of registered FSPs.

The FAIS Act lays down a framework applying to financial services providers FSPs relative to

- fitness, qualifications and integrity of individuals
- solvency, operational compliancy of financial services intermediaries wrt fixed address, telephone, bank account, storage/filing facilities, money-laundering control

- accounting records and annual audit required from financial services intermediary
- client assets report held separate from the entity's own funds
- financial services intermediary compliance with General Code of Conduct and Special Code of Conduct for that industry
- Code of Conduct lays down requirements with respect to disclosure to clients, recordkeeping, client statements, accounting, auditing, conflict of interest, giving of advice, risk management, internal controls, advertising, complaint resolution
- Ombudsman must be in place to hear and adjudicate complaints not resolved by the internal complaints resolution mechanisms

Capital Markets Department VZ p133 esp last 2 paras

Regulates capital markets in terms of the Securities Services Act SSA.

- aims to provide a balance between investor protection and the international competitiveness of the capital markets in SA and to promote confidence and stability in the securities services domestically and internationally

The functions of an exchange in terms of the SSA is to establish maintain and provide an infrastructure to bring together buyers and sellers of securities and match their orders.
Securities include stocks, shares, depository receipts in public companies and other equities, notes, derivatives, bonds, debentures, units in a collective investment scheme CIS (local and foreign), index based instruments, foreign securities and rights in any of the above securities excluding money market instruments.

The SSA allows licensing of different types of exchange, traditional and electronic and alternative trading systems.

An exchange must ensure compensation to prejudiced consumers
Functions of the exchange include issuing and enforcing rules, directives and listing requirements ensuring compliance with the rules by authorized users and listing requirements by the issuers of securities;
Suspension of rules and listing requirements under certain circumstances;
Facilitating clearing and settlement of transactions.

Off-market transactions in listed securities between financial institutions are permitted if they both act as principals. The deals must be reported to the Registrar for disclosure.

Central securities depositories and clearing houses must also be licensed and supervised by the FSB.

Registrar is required to issue a Code of Conduct to be binding on all FSPs and their officers, their employees and clients.

The Directorate of Market Abuse is responsible for insider trading and all

the associated crime related to the specific industry.

Price stabilizing mechanisms to ensure an orderly secondary market following a new issue of shares for a limited period of 30 days.

Provision for enforcement actions like judicial management, curatorship, right of appeal, criminal offences and penalties.

Ensures compliance with international regulatory standards wrt regulation and supervision of capital markets b participating in the International Organisation of Securities Commissions.

The Insurance Department VZ p134

Regulates the long-term and short-term insurance industries.

The LONG-TERM insurance act makes the following provisions:

- registration of long-term insurers
- regulation and control of the activities of long-term insurance companies and intermediaries.
- Prudential regulation safeguarding the financial soundness of insurance companies is particularly important because of liabilities to policyholders assumed by long-term insurers
- Investor protection. Policyholder protection rules. Extensive disclosure requirements.

The SHORT-TERM insurance act provides for

- registration of short-term insurers, regulation and supervision of short-term insurers and intermediaries
- Policy protection rules to protect consumers

Functions of insurance department:

- on-site visits to ensure solvency, investment risk, risk management, underwriting risk, systems and operational risk, market risk, financial reporting, corporate governance, external audits, strategic management, general regulatory compliance. Regulatory standards must comply with international regulatory standards by participation in the activities of the International Association of Insurance Supervisors and the Financial Stability Forum.

Directorate for Market Abuse VZ p135

Previously Directorate for Insider Trading
A department of the FSB that monitors insider trading and all the associated criminal activities that go with it.
Members are appointed by the Minister and consist of stakeholders such as representatives from the exchanges. It reports to the FSB and the Minister regarding its activities. The Directorate is empowered to investigate market abuse and take civil action against perpetrators.

Inspectorate Department VZ p135

Inspection of Financial Institutions Act
Registrar may order an inspection at any time of a financial institution.
Registrar must ensure that the inspector can report accurately and objectively.
The inspectors may:

- administer an oath or affirmation
- examine any person who was or is a director, partner, or any grade of staff, or shareholder of a financial institution
- enter and search the premises or require any documents of the institution, without warning
- open any strongroom, safe or container
- examine and copy any document or part of document manually or otherwise, or remove the above with a receipt
- seize any document upon issue of a receipt
- retain such documents for as long as they may be required

Retirement Funds and Friendly Societies Department VZ p136

Includes employer sponsored pension funds, provident funds, preservation funds, retirement annuities
All must be registered in terms of the Pension Funds Act
The Act requires that

- pension funds be financially sound by adequate funding for long-term and short-term liabilities
- pension Actuaries do valuations and ensure that assets and liabilities are matched i.e. that the fund does not hold short-term assets to fund liabilities required only in 30 years' time

The FSB supervises retirement funds by

- registering funds and approving their Rules
- analyzing the annual audited financial statements and ensuring that investments comply with prudential investment guidelines
- analyzing actuarial reports to ensure that funds can meet their liabilities
- enforcing payment of contributions by employers to employer-funded funds

Specific consumer protection measures include

- Member representation on the Board of Trustees of a fund
- Compulsory annual benefit statements for each member
- Internal complaints resolution mechanisms, access to the Pension Funds adjudicator (similar to ombudsman)
- Member sharing in pension fund surpluses

Friendly Societies (mostly Burial societies)
Usually funded by member contributions only.
FSB supervision includes

- Fund registration and Rule approval to ensure compliance
- Analysis of annual audited financial statements and ensuring that investments comply with prudential investment guidelines

Collective Investment Schemes Department CIS
CIS in securities, property and participation bonds are supervised in terms of the CIS Control Act, which are regulated thus:

- Managers of CISs must be registered
- Managers of CISs must comply with capital requirements and provide seed capital for each portfolio they administer
- Portfolios must comply with prudential investment guidelines
- Registrar must give approval prior to registration
- Managers must comply with quarterly reporting requirements
- Investors must receive annual reports containing prescribed information

Associations may be licensed to act at SROs for the whole or a part of the industry.

3.2 Short-term insurers

3.2.1 6.1 Introduction VZ p142

Last paragraph AR
There are two kinds of risk: Pure risk and speculative risk. Pure risk is unforeseeable circumstance. Short Term deals with eventualities, long term with certainties.
"Know the difference between speculative and pure risk, and which is covered by insurance."
Speculative risk results in a profit or a loss and is not covered by insurance.
Pure risk may result in loss but there is no possibility of profit/benefit.

6.1.1 Short-term insurers VZ p143

"Be able to define short term insurance and state what risk it covers."
"Describe the fundamental characteristics of short-term insurance."

- Provides protection against specific pure risk
- Represents the sharing of risk by many to protect individual policyholder against unexpected adverse events
- Short-term insurers carry out this financial burden in return for a premium
- Short-term policy is legally binding contract between insurer and policyholder, the insured. Policyholder pays **premiums** in return for insurer's promise to pay specified amounts in the event of possible future events. Short-term insurance deals with **eventualities** not certainties. The insurer underwrites the policyholder's risk, thus the policy is a **liability** to the insurer.

Short-term insurance does not represent an asset, but protection against a possible future loss, when the insured would be compensated for his loss. The principle is restitution, to put him back in the position he was before

the loss.

Lapse in the payment of premiums causes the contract to lapse unless it is renewed between the parties. Premiums are paid into a pool from which claims are paid. It follows that the more frequently and the higher the value of the claims that are made, the higher will be the premiums for the following year. Short-term insurance is generally taken out for a year with premiums paid annually or monthly.

6.2.1 The short-term industry in SA VZ p144

"Make sure you can define and distinguish between the following:"

- **General or typical insurers**
  provide insurance for many of the different types of risk insured by the short-term insurance industry
- **Niche insurers**
  provide specific insurance e.g. transport, aviation insurance
- **Captive insurers**
  self-insurance institutions
  e.g. SABSure which is a subsidiary of SAB and its own insurance arm
- **Cell captive insurers**
  sell shares (cells) to companies, which sell insurance on to their own clients. E.g. Motor manufacturer like M-B may hold shares in a cell captive insurance company and then offer this insurance to its clients.

3.2.2 Activities of short-term insurers

6.3.1 Services provided by short-term insurers VZ p147

8 kinds of policy:

- motor policies (relating to owning, possession or use of a vehicle)
- accident and health (disability, health or death)
- property (use, ownership, loss or damage of im/movable property)
- transportation (possession, use, ownership of vessel/craft for **conveyance/storage of persons/goods by air, land, water)**
- liability (incurring a liability)
- engineering (possession, use, ownership of machinery/equipment, **installation of machinery, erection of structures/buildings)**
- miscellaneous (not covered by any of the others)
- guarantee (insurance for the obligations of a contract not being discharged)

6.4.1 Financial statements of short-term insurers p154

"Make sure that you understand the main sources of income of short-term insurers and the main expenditure items."
"Understand why short-term insurers should invest a large part of their funds in liquid assets (i.e. owing to the uncertainty of their liabilities)"
"Understand the different items which appear in tables 6.5 and 6.6 but you do not have to know them off by heart."

Income of short-term insurers:

- premium income
- investment income

Expenditure:

- claims payments
- reinsurance premiums

- taxes
- administrative costs

Balance Sheet fig 6.6 VZ p155

- Financial management should focus on liquidity and making sure that there are sufficient funds to meet short-term claims
- Uncertain nature of short-term insurers needs a large part of total assets to be kept in cash and deposits, and investments in financial instruments is more important than investment in fixed assets.

3.2.3 Regulation of short-term insurers VZ

6.5.1 Regulation of short-term insurers VZ p156

"Be able to explain why regulation is necessary. This is explained in the introductory paragraph of section 6.5."

The Short-term insurance Act regulates the short-term insurance industry.
Regulation is necessary because:

- Insurance is a contract to pay money in the future based on some eventuality therefore the solvency and liquidity of short-term insurers are of paramount importance.
- Insurers have greater knowledge and bargaining power than their insured, the policyholder, who is therefore susceptible to manipulation and malpractice.

"Know the Policyholder Protection Rules covered in Box 6.2 as you may be asked interpretive questions on the contents."

Box 6.2 Policyholder Protection Rules for Short-term insurers VZ p159

1 About the intermediary
2 About the insurer
3 Other matters of importance
4 Warning
5 Particulars of Short-term Ombudsman
6 Particulars of Registrar of Short-term Insurance

"Know that the role of the Ombudsman in the short-term industry is that he is not responsible for regulating the industry but is appointed to mediate disputes."
"Know that the role of the Ombudsman in the short-term industry is that he is not responsible for regulating the industry but is appointed to mediate disputes." The Ombudsman can be contacted in the case of a dispute between insurers and clients in the case of rejected claims. Insurance companies abide by the advice and recommendations of the Ombudsman.

3.3 Long-term insurers

3.3.1 The role of long-term insurers in the economy

6.1.2 Long-term insurers VZ p143

"Study 6.1.2 and make sure you can:
Correctly define long-term insurance.
Long-term insurance involves both risk assessment and investment value.
Distinguish clearly between short-term and long-term insurance."

6.2.2 The long-term insurance industry VZ p146

"Study 6.2.2 and make sure you can distinguish between mutual and long-term insurance companies."
Mutual insurance companies are nonprofit organizations and are owned wholly by their policyholders
Public insurance companies are profit-seeking companies selling shares

3.3.2 The activities of long-term insurers

*"Study 6.4.3 and ensure that you understand the different types of products provided by long-term insurers. You will **not** be expected to list the **services** provided by long-term insurers but you **will** have to answer interpretive questions on their services and products."*

6.3.2 Long-term insurers: Products VZ p149, 150 - 153

Two kinds of products are demanded:
(i) products that combine risk cover with an investment vehicle and
(ii) products which separate risk cover from investments.
The industry caters for both, here follow some of the products available:
Life insurance / Annuities / Credit/debt life assurance / Disability assurance / Funeral assurance / Health or medical insurance
Single premium policies / Second-hand policies / Business insurance / Fund policies / Linked policies

6.4.2 Financial statements of long-term insurers

"Study 6.4.2 and make sure you understand:
The main sources of income of long-term insurers and the main expenditure items.
Why long-term insurers invest a smaller part of their funds in liquid assets than short-term insurers (i.e. because their policies are much more predictable)

You do not have to know tables 6.7 and 6.8 by heart but you should understand the different items that appear in them.

3.3.3 Regulation of long-term insurers (by the FSB)

6.5.2 Regulation VZ p161

"You should know that the Long-term insurance Act regulates the long-term insurance industry but you do not have to know any detail of the Act.
You should know what is covered in the Policy Protection Rules VZ p159 and be able to answer interpretive questions on this table.
You need to understand that the role of the Ombudsman for long-term

insurance is not regulatory but mediatory in the case of disputes."

3.4 Retirement Funds

7.1 Introduction VZ p175

"Study 7.1 and 7.2 and make sure you can:
Define retirement funds
Retirement funds are nonprofit institutions that collect, invest and administer money contributed to them by individuals and companies.
Consider retirement funds as savings pools regulated for the protection of individuals that enable people to save cost- and tax-efficiently for their old age.
Make sure that you can define and distinguish between the following retirement fund terms:
Members and sponsors
Contributory and noncontributory funds
Defined benefit funds and defined contribution funds
Pension funds and provident funds"

Under an **employer-sponsored scheme** employees or **members** contribute to a retirement fund overseen by their employer, the **sponsor**.
Contributory funds involve a contribution by the employee as well as the employer, where **noncontributory funds** have the entire contribution made by the employer and none by the employee.
The two broad classes of retirement funds are:
Defined benefit funds where the benefit is calculated according to a formula linked to the employee's final salary. The investment risk of the fund lies with the employer who must contribute more if the fund does not perform well but who may take a contribution holiday if it does.
Defined contribution funds, where the retirement benefit = total contribution + investment value. If investments do not perform well, employee retirement benefits are significantly reduced.
A Pension fund provides a life pension after retirement with the option to commute one-third to taxable cash on retirement.
A Provident fund provides a taxable cash lump-sum on retirement.
There are also differences in the tax relief on contributions, between the two. At present R120 000 is tax free.
The government allows **tax concessions** on contributions to encourage people to save for retirement and to be independent of government assistance in old age or disability.

3.4.2 The activities of retirement funds SG p57

7.3 Defined benefit vs defined contributions VZ p178

"Study para 1 of 7.3 and ensure you can explain why many retirement funds have switched from defined benefits to defined contributions."

- Easier for members to understand the benefits
- Members have wider range of choices and greater flexibility
- Less complexity in terms of surplus distribution
- Administration requirements less onerous

"Study table 7.2 and ensure you can distinguish between defined benefits and defined contribution funds as far as the following are concerned:"
Compulsory reading AR

	Defined Benefit	Defined contribution
member contribution		
company contribution		
describe benefits and how they are calculated		
other benefits		
administration requirement		
who carries the investment risk		

Make sure you understand the differences between a pay-as-you-go scheme and a funded scheme

Defined benefit schemes may be
"pay as you go", where current contributions paid by active (currently employed) members fund the benefits to retired members. This may cause trouble in an environment where the ratio of retired members to active members decreases, causing undue financial burden to the active members.

or "funded", where active member and sponsor contributions are held in an investment fund intended to provide the future benefits to the active members. Under funded schemes accrued benefits are secured and not vulnerable to possible employer insolvency.
Employer sponsored retirement funds in South Africa operate on a funded basis, in Europe mostly pay as you go, which creates problems with a growing old and a shrinking young population.

Make sure that you know what the term hybrid scheme refers to.
A hybrid scheme is a defined contribution scheme which offers some defined-type benefits, e.g. provision of a death benefit fixed as a multiple of annual salary and usually reinsured with a life assurer.

Advantages and disadvantages to parties in both types of fund
VZ p179
Make sure you understand the advantages and disadvantages to both members and sponsors of defined benefit funds and defined contribution funds as listed. Be prepared for interpretive questions on this topic.

Defined benefit funds

Advantages	***Disadvantages***
For member/employee	
- Benefits are guaranteed	- Less flexibility in benefit choice
- Contributions are fixed	- No member choice in investments
- Investment risk is employer's	- A bad sponsor financial position may mean that contributions cannot be increased, leading to benefits cut
- Possibility of enhanced benefits if there is a surplus	
- Fund can be structured to provide	-More complicated to determine the

better (than dcf) benefits for early leavers or retrenchments	true value of benefits than in dcf
Advantages	***Disadvantages***
For sponsor/employer	
- Can structure special packages to attract staff - Good investment performance or claims experience can make the scheme less costly than dcf - Benefits can be structured to influence decision to retire so that staff can be retained longer or encouraged to leave earlier	- Unknown costs per employee - High risk to employer - Contributions must be increased when investment performance is poor - Accrued surplus might produce pressure to increase benefits - Admin costs can be higher than dcf due to complexity - Complex nature of benefits can erode members' appreciation of the value of the benefit

Defined contribution funds

Advantages	***Disadvantages***
For member/employee	
-Members share directly in good investment returns. Can frequently choose nature of investment portfolio. -Contributions are fixed -Easier to understand benefits and cost of additional benefits than dbf. -No cross-subsidy between different members; all members get their contributions + net growth. -Benefits usually purchased from insurers allowing flexibility in choosing benefit structure and amount of each benefit.	-No guarantee re amount of future benefits -Members carry the investment risk -Members need to purchase a pension at retirement with their benefit, even if at a higher than anticipated cost owing to low interest rates. -More member financial planning is required under this type of scheme so that the cost of purchasing a pension is not underestimated.

Advantages	***Disadvantages***
For sponsor/employer	
-Contributions are fixed -Structure simpler, admin cheaper -Dcf might appeal to the younger generation, making it easier to recruit them -Fixed% contribution allows easy budgeting for benefit costs based on payroll -Members tend to value their benefits more as these are expressed as a current pot of money rather than a future promise	-Employers do not benefit from educating members re choices may expensive in terms of time, money -If members retire at disadvantageous times, employers might feel obliged to help them

3.4.3 Regulation of retirement funds

7.4.1 Legislation VZ p184

You should know that funds formulate their own rules and what is covered by these rules. You may be asked to indicate whether an aspect is defined by the rules or not.

The Rules of a fund should cover the following areas:

Name of fund
Objective of fund
Requirements for membership
Under what circumstances membership will cease
Under what circumstances members or their beneficiaries will become entitled to benefits
Nature of benefits provided by the fund
Amount of benefits or how these will be determined
Process to be followed in appointing fund's officers e.g. trustees
Process to be followed in removing fund's officers
Powers of the fund's officers
Process to be followed in changing fund's rules
Appointment of auditor
Method to be followed in settling disputes
Custody of fund-owned securities
How fund may be terminated or dissolved
Appointment of liquidator if required

Regulation 28 VZ p185

You should know that Regulation 28 stipulates the maximum exposure a fund may have to each type of investment asset class. You do not need to know exactly what the current regulations are but you should have a good idea of what they contain.

Maximum exposure of a fund to any investment asset class:

Max 75% in equities
Max 15% in foreign assets
Max 90% in a combination of shares and property
Max 20% on deposit with a single bank (100% may be held as cash)
Max 10% in KrugerRands
Max 20% with any single issuer of bonds except Government bonds (100% may be in bonds, 100% may be in Government bonds)

Hedge funds and derivatives are not explicitly mentioned in the current set of regulations. Investment in unit trusts and life assurance policies is allowed but the underlying investments must conform to the regulations.

7.4.2 Taxation VZ p186 Read this AR

You must know the following:

(i) **Taxation of retirement fund contributions**
Members' contributions to retirement funds are not treated as taxable income but there is a limit to the amount of contribution to a retirement fund

(ii) **How the investment income of a retirement fund is taxed**

A proportion of certain investment income received by a retirement fund is taxed at 18%. Taxable income includes interest, property rental and foreign dividends. There is currently no capital gains tax on retirement fund income.

(iii) **How a lump sum is treated in terms of taxation**
A retiring member can take some of his benefits as a lump sum on retirement and part of this lump sum is tax free.

(iv) **How a monthly pension is taxed**
Remaining assets in the retirement fund used to provide a monthly pension to the member is taxable income but there is an indirect tax benefit arising from progressive taxation. Most members receive a lower income in retirement thus their tax rate is higher while contributing (and getting a tax break) and lower in retirement.

3.4.4 Investment strategy of retirement funds

7.5 Investment strategy VZ p187

"Study 7.5 and ensure you understand and can answer interpretive questions on the nature and term of the liabilities and assets of retirement funds:"

7.5.1 Matching the nature and term of liabilities and assets VZ p188

A retirement fund's liabilities are the benefits to be provided at some time in the future. To avoid being unable to meet liabilities, assets held should behave in a similar way as the liabilities. The term of the liabilities must be considered so that settlement is possible. The sooner the liability is due, the shorter-term must be the investment.

The nature of a liability refers to whether the liability is **nominal,** a fixed known amount like a flat rate pension, in which case assets like fixed-income government or corporate bonds are used. These provide fixed monetary amounts at fixed future dates. If the future payments are known in advance, the fund can match the payments from assets to future payments from the scheme.

In the case of liabilities being an unknown amount, **real liabilities**, as in the case of a pension which is inflation linked, it is more common to use assets which provide income appreciating with inflation, such as shares or index linked bonds, which have coupons which are increased in line with a published inflation index.

In a defined contribution scheme, assets and liabilities are always matched because the member receives the exact amount of the asset. Most defined contribution funds should invest heavily in equities since the first goal of the investment strategy is to provide returns in excess of inflation.

7.5.2 Investment strategy of a growing vs. contracting fund VZ p189

A growing fund receives more contributions and investment income than it pays in benefits, leaving excess funds for investment. In this way the fund will not need to sell any investments until benefits payable exceed contributions + investment income. The advantages of this position are (i) that the fund does not need to consider liquidity and can invest in a wide range of assets, and those carrying higher expected returns; (ii) the near term liabilities are paid from contributions thus the investments are made to meet long-term liabilities. The fund can invest in more speculative or

volatile assets since it would be unlikely to have to sell assets at an unfavourable time.

A contracting fund must sell assets to meet benefit payments and should hold assets with high income yields which allows the fund to sell fewer assets. The fund will also aim to invest in assets with stable market values to avoid losing money on liquidation; the most suitable assets in this case are government bonds and cash.

7.5.3 The fund's solvency position

Retirement fund investment strategy is legislated and exposure to equities is limited to 75% of investments even though the fund's solvency position may make a higher position optimal.

3.5 Investment institutions

3.5.1 Role of investment institutions in the economy

8.1 Introduction VZ p194

"Study 8.1 making sure you can describe how investment companies receive cash inflows. "

Individuals invest to increase their consumption in the future (make a profit) and to maintain financial independence on retirement.
Retirement funds have to meet obligations to members and their beneficiaries.
Insurance companies have to be able to meet claims received and earn a profit.
Companies and governments may need to invest surplus funds or invest to accumulate money for future projects.

"(8.1) Make sure you can explain how investment companies have to manage cash inflows so that they can achieve the required rate of return expected by their investors."

Investment institutions must aim to achieve the rate of return required by investors, which rate of return must compensate the investor for his decision to postpone consumption.
Three important considerations for fund managers:
The required rate of return is determined by the time value of money, the rate of inflation and risk.

To spread their risk, investment institutions spread their risk by investing in various **asset classes**, which consist of **real assets** (e.g. land, buildings, equipment) and **financial assets** (also called **securities**) (e.g. ordinary shares, preference shares, bonds).

8.2 The role of investment institutions in the economy VZ p195

"Study 8.2 and ensure you can describe the four roles of investment institutions in the economy. You do not have to be able to distinguish between technical and fundamental analysis."

8.2.1 Financing

Investment institutions buy financial securities sold by companies to finance assets. Investment bankers also assist with the issuing of securities.

8.2.2 Wealth creation

Investment institutions have a fiduciary duty when they act as custodians of the assets they manage, placing the client's interests before its own. The investment institution must create wealth for its investors, meeting their required rate of return. The investment must increase in value, and/ or earn interest, earn rent, earn dividends.

8.2.3 Improve market efficiency

Investment institutions have to undertake research into prospective investments. This results in an increase in the flow of information about public companies and thereby increases market efficiency. An efficient market has the following characteristics:

-Market information re prices and volume is accurate and available timeously

- Assets are liquid, can be bought and sold quickly at a price close to the prices of prior transactions, ceteris paribus

-Low transaction costs prevail (costs of transport, brokerage, transfer of ownership)

-Prices respond quickly to new market information.

8.2.4 Price discovery vz p196 complete this

3.5.2 Activities of investment institutions

8.3 Organisation VZ p196

"Make sure you can distinguish between ***management and advisory firms****, and* ***fund companies****."*

Management and advisory firms offer a range of services such as
Standard banking transactions (accounts and personal loans)
Advice on portfolio structure
Managing the investment funds

Examples: Approved investment managers / Investment bankers / Private bankers

Investment/fund company

Invests a pool of funds belonging to many individuals in a single portfolio of securities.

Examples: Unit trust companies / Investment trusts / Hedge funds / Property Unit trusts / Participation mortgage bond managers / Public investment commissioners

8.4 Types of investment institution VZ p197

"*Study 8.4.1 and ensure you can do the following:"*

(i) Define unit trust companies

Unit trust companies are fund companies, receiving investors' money, issuing subshares or **units** to investors, pooling the money, and investing it on behalf of the unit holders in various securities.

(ii) Types of investment offered by unit trusts

Equity funds
Balanced funds
Bond funds
Money market funds
Aggressive growth funds
Mining funds
International unit trusts

Income funds
Gilt/bond funds
Fund of funds

(iii) Describe the two main services provided by a unit trust
Instant Diversification VZ p198
The pooled funds are invested in a wide range of securities, reducing risk.
Professional management
The fund manager has greater knowledge and experience of financial markets compared with the individual investor, and his expertise should provide superior investment returns over those of an inexperience individual acting autonomously.

***(iv) Describe the three entities comprising a unit trust and the characteristics of each entity* VZ p199 last para**
The Fund
The pool of assets consisting of any asset quoted on the JSE and liquid assets. Each unit in the fund is identical to all the others; each unit contains the same proportion of all the fund's assets. The fund cannot become insolvent. If liquidated, unit holders will be repaid and there are no preferential claims.
The Trustee
The custodian of the assets, who must ensure that the assets are held as the property of the unit holders and that the trust is managed according to the terms of the trust deed.
The Management Company
Handles the buying and selling of units, makes investment decisions, carries out the admin associated with these duties.

***(v) Explain how investors can invest in a unit trust* VZ p200**
Investors in unit trusts and invest single amounts, periodic lump sums, or make monthly investments. The latter enable rand cost averaging; the investor buys in at various high and low stages of the market.

***(vi) Explain that unit trusts are legally obliged to invest in a diversified portfolio* VZ p200**
The Unit Trust Control Act provides that no more than 5% of the assets may be invested in any single security, or 10% if the market value of a company's shares is over R2 bn, or where the funds are invested in an investment trust. Minimum 5% must be in liquid assets.

8.4.2 Investment trusts VZ p200

An investment trust is also a fund company. The investor money received is pooled and invested in various securities. The investors are called the participants of the share plan.

"Study 8.4.2 and make sure you can:"

(i) Distinguish clearly between unit- and investment trusts
Unit Trusts
-May not invest more than 5% in any one security
-Are not listed on an exchange
-Price is determined according to trust deed and depends on value of underlying securities

Investment Trusts
-Freedom to invest in terms of investment strategy of the trust
-Listed share on the JSE
-Price determined by supply and demand

***(ii) Explain how to determine* VZ p200**

(a) the value of the shares in investment trusts
The value of the shares depends on supply and demand.

(b) the net asset value per share
The share price may rise above or fall below the **NAV** net asset value of a share. NAV = (market value of the portfolio – liabilities) / number of shares issued. Shares selling below NAV are traded at a discount, shares selling above NAV at a premium.

8.4.3 Hedge funds VZ p202

"Study 8.4.3 and make sure you can:"

(i) Define a hedge fund
A pool of private capital structured as a limited partnership with the objective of consistently achieving returns exceeding market returns under all market conditions, by investing in any asset class and using any investment strategy including leverage (shares v debt), derivatives (investments from other entities) and arbitrage (high v low selling). The hedge fund serves as a hedge against market downturns.

(ii) Explain the entities comprising the hedge fund
(a) The investors or **limited partners**
(b) The investment manager or **general partner**, who normally also has own money invested in the fund and whose compensation is incentive based depending on the performance of the fund.

(iii) Differences between a unit trust and hedge fund:
Unit Trusts
-Max 5% in any single security
-Managed by Fund Manager who is paid regardless of performance
-Allowed to advertise
-Available to general public by prospectus
-Traded daily
-Small fee to redeem
-Unlimited number of investors

Hedge funds
-Freedom to invest per investment strategy of fund
-Managed by General Partner whose fees are based on profits
-Not allowed to advertise
-Available to high net worth individuals and institutions by confidential offering memorandum and partnership agreement
-Illiquid – may not be able to redeem immediately
-Lock-in period to prevent aborting any strategy
-Private pool of investment capital, limited to the partners

8.4.4 Property Unit Trusts VZ p203

"Study 8.4.4 and make sure you can:"

(i) Define a property unit trust

Property Unit Trusts are the securitization of property, in that the property assets are placed in a pool and share certificates, representing ownership of the assets, are sold to pay for them. Property is generally less liquid than shares so this is a good option.

***(ii) Explain the specific risks faced by property unit trusts* VZ p204**

-Default risk – renters of premises will default on rent payments or contracts
-Risk of not letting all the space
-Risk of disaster like earthquake, fire, war, terrorist attack

8.4.5 Participation mortgage bond managers VZ p204

"Study 8.4.5 and make sure you can"

(i) Define a participation mortgage bond manager

A participation bond scheme pools funds received from investors and lends them by granting first mortgage bonds over commercial or industrial properties. Each loan granted by a manager is funded by a group of investors who participate in that particular loan. Two distinct products exist: property finance and participation bond investments.

8.4.6 Public Investment Commissioners VZ p204/5

"Study 8.4.6 and make sure you can explain the function of the PIC"

The PIC main objective is to manage and control trust funds which become the responsibility of government. It is entrusted with investing the following:
-Contributions made to pension and provident funds of government employees and their agencies, like the Government Service Pension Fund, etc.
-Contributions received by social security funds, like UIF, Workmen's Compensation fund, Mines and Works Compensation Fund.
-Guardian's Fund, consisting of funds from deceased estate and funds held on behalf of minors and persons designated in terms of court orders.
-Other funds, like funds belonging to the SABS and HSRC, bursary trust funds and redemption funds for the repayment of loans raised by universities.

8.4.7 Approved investment managers VZ p205

"Study 8.4.7 and make sure that you:"

(i) Understand what approved investment managers do

Investment managers must be registered with the FSB. They may invest investor funds in the following:
-Equities
-Equity and loan stock (Bonds and debentures)
-Derivatives (Futures, options and swaps)
-Equity and derivatives
-Collective investment schemes
-Linked investments

(ii) Know what an investment statement is and what factors must be taken into account when producing it

An investment statement must establish the asset allocation of an investment. It must take into account:
-Investment objectives of the investor (growth, income, capital preservation)
-Investment experience and knowledge of the investor
-Constraints of the investor
-Risk tolerance of the investor

8.4.8 Other investment institutions VZ p206

"Study 8.4.8 and make sure you can define:"

(i) Investment banker

undertakes specialized tasks like facilitating mergers and acquisitions, promoting and marketing share of companies. They may use either private placement of shares, involving the sale of shares to a small group of investors or institutions, or public offering of shares, involving a prospectus inviting investors to buy the shares of the company.

(ii) Private banker

provides banking, investment and estate planning services to high net worth individuals.

(iii) Tradable indices

This system provides the investor with all the benefits of diversification for the cost of one transaction by purchasing a single JSE listed security which gives the same return as if the investor directly purchased shares in the JSE's ALSI 40 Index. "A composite of shares" (AR)

3.5.3 Regulation of investment institutions VZ p206

"All that you need to know here is that"
Investment institutions are regulated by the FSP.

3.6 Microfinance institutions

4.1 Microfinance institutions defined VZ p98

"Make sure you are able to define microfinance institutions."
Microfinance institutions are organizations that provide savings, loans, money transfer services, insurance and other financial services to poor and low-income clients, those more vulnerable than traditional banking clients.

4.1.1 Microfinance terminology VZ p99

"Know what the terms mean."
-Microcredit
-Microloan
-Group lending
-Collateral
-Rotating savings and credit associations (ROSCAs)
-Microsavings
-Microinsurance

3.6.2 Different types of MFIs VZ p100

"You have to be able to define the different MFIs and know how they are regulated"

4.3 Member based financial institutions

4.3.1 Stokvels VZ p102

"Study 4.3 and make sure you can define a Stokvel in about 50 words, know that it is self regulating and should be a member of the National Stokvels Association of South Africa NASASA."

A Stokvel is a group of individuals who make regular contributions to a common fund on a regular basis. Each member can draw from the fund, usually for a specific purpose. The pool is often given in total or in part to each contributor on a strictly rotational basis. Stokvels have the following major features:

-The arrangement is **rarely formalized** by a written agreement

-The key economic reason for participation is to **accumulate cash** and obtain **access to credit** in the absence of full participation in the formal banking sector

-Depending on when in the cycle of the stokvel a member receives the pool of funds, he is either in the position of a borrower or a saver. The risk of default by an early receipient is borne by those who have not yet received the pool.

The types of stokvel:

-Traditional stokvels are general savings clubs rotating pooled funds to members on a mutually agreed basis.

-Burial stokvels are established to assist members with funeral costs, formed between people with a common bond to provide a way for members to save for and insure against the costs associated with the death of a family member. They are either pre-funded or collection type burial societies.

-Investment stokvels save or bank the savings pool with the aim of carrying out capital projects or investing in a business venture, property or shares. Members are generally more affluent and contributions are higher than of traditional stokvels.

For purposes of self regulation a stokvel must be a member of NASASA.
A stokvel must keep accounting records which must reflect its transactions, financial position, and business.
A stokvel worth more than R1m must produce annual financial statements. Over R1m it must produce a report by an accountant and auditor. The maximum limit of a stokvel is R9.99m, after which it must be registered as a mutual bank.

4.3.2 Savings and credit cooperatives (credit unions) VZ p104

"Make sure you can define a savings and credit cooperative in about 50 words and know that it is self regulating and should be a member of the Savings and Credit CoOperative League of South Africa SACCOL."

A cooperative is an autonomous association of persons united voluntarily to meet their common economic, social and cultural needs and aspirations through a jointly owned and democratically controlled enterprise. They are based on self-help, self-responsibility, democracy,

equality, equity and solidarity. Members believe in the ethical values of honestly, openness, social responsibility and caring for others.
Cooperative principles are as follows:
-Voluntary and open membership
-Democratic member control
-Member economic participation
-Autonomy and independence
-Education, training and information
-Cooperation between cooperatives
-Concern for community

A savings and credit cooperative or **credit union** pools savings for members and provides credit facilities.
For purposes of self regulation, a credit union must be a member of or affiliated to SACCOL or any such similar representative self regulatory body approved by the Registrar of Banks.
A credit union must keep accounting records explaining its transactions, financial position, state of affairs and business.
It must produce annual financial statements; if value is over R1m a report by an accountant and auditor is required. The maximum limit of value is R9,99 million otherwise it would be required to register as a mutual bank.

A cooperative must register with the Registrar of Cooperatives which falls under the DTI.
If a cooperative grants microloans it must register with the MFRC MicroFinance Regulatory Council and abide by its standards and rules.

4.3.3 Financial service cooperatives (village banks) VZ p108

"Make sure you can define financial service cooperatives in about 50 words, understand their relationship with a link bank and that there is currently no regulatory body. Have a look at 4.8.3 where the CoOperative Banks Bill is discussed."

Village Banks are community supported banks owned and controlled by their members, with a link to formal banks. They provide access to financial services within rural communities by accepting funds from members against the issue of shares. They accept deposits and advance loans to members, allowing member to share in the profits of the organization and to nominate its management.
The financial services cooperative is incorporated under the CoOperatives Act and are exempt from the provisions of the Banks Act provided that
-they only accept deposits from and advance money to their members
-they maintain a business arrangement with a link bank, an account with the bank, a bank/client relationship with the bank, and that it takes advice, support and training from the bank.
The upper limit on the deposits of a financial services cooperative if R10m after which it must register as a mutual bank.
The financial services cooperative must product accounting records, accounting and auditing in terms of the Cooperatives Act.
The Cooperatives Act provides that Financial services cooperatives should be a member of a regulatory body approved by the Registrar of Banks.
However the two regulatory bodies FSA and Finasol have ceased

operation and there is no proper regulation at this stage.

4.3.4 Friendly societies VZ p109

"Make sure you can define friendly societies in about 50 words and know that they are supervised by the FSB (Registrar of Friendly Societies)."

Friendly societies are cooperative organizations facilitating savings. They offer a wide range of services to members including:

-Providing relief during minority, old age, widowhood, sickness
-Granting annuities and endowments
-Payments on birth of a child or death of a family member
-Payment of funeral expenses
-Insurance of trade tools used in work by a member
-Financial assistance on resignation or dismissal
-Unemployment relief
-Provision of funds for education or training of members or their children

Regulation of friendly societies is supervised by the FSB.
Friendly societies may not provide retirement benefits.
Friendly societies may not provide an annuity of more than R144 p.a.
Friendly Societies may not provide any death, disability, endowment or other benefit whose value exceeds R5000.
A friendly society may not register as an insurer.

4.3.5 Mutual banks VZ p110

"Make sure you can define mutual banks in about 50 words, know how they differ from banks and the statutory requirements they must comply with."

Mutual banks accept deposits from the general public, provide payment services like cheques and electronic transfers and make available credit such as overdrafts, home, term or asset backed loans. They are subject to the same principles of accountability and risk management as banks.

Mutual banks differ from banks in:

Ownership: A mutual bank does not have to be a public company, like a bank. Mutual banks are owned by their members who receive returns in the form of interest payable on the specific type of share in which they have invested.

Minimum capital requirement: R10 million or 10% of assets and other risk exposures.

A mutual bank is obliged to:

-maintain issued primary and secondary share capital as well as primary and secondary unimpaired reserve funds, in an amount of at least R10m or up to 10% of its risk exposure
-maintain minimum reserve balance of approx 2.5% of liabilities to the public in a SARB account
-hold liquid assets min 5% of public liabilities
-give detailed monthly and quarterly returns showing risk exposures and compliance with capital adequacy and liquid asset requirements
-get board approval for exposure to any individual in excess of 10% of

qualifying capital and reserves, and Registrar of Banks' approval for exposure to any individual in excess of 25% of same.

4.4 Banks VZ p112

"Study 4.4 and make sure you know that there are some banks that act as microfinance institutions."

4.5 Other MicroFinance Institutions VZ p113

"Study 4.5 and ensure you can:"

4.5.1 NGOs VZ P113

(i) Define NGOs which provide Microfinancing in 15 words.

NGOs are not-for-profit MFIs that extend microcredit to very poor households for micro-enterprise purposes.

4.5.2 Ithala VZ p114

(ii) Define Ithala in about 50 words

Ithala is KZN's sole provincial development finance agency. Its primary objective is to create sustainable economic growth in KZN and its activities include:
-Accepting deposits to encourage savings and foster personal wealth creation
-Providing loans for housing and home improvements
-Supplying insurance products
-Funding business enterprises
Ithala is in the process of applying for a banking licence.

4.5.3 Land Bank VZ p114

(iii) Define the Land Bank in about 50 words

The Land Bank is a parastatal whose Board reports to the Minister of Agriculture and Land Affairs and which is the leading agricultural financier in South Africa. It offers financial services to established and emerging framers. Its mandate is to contribute to rural development and stability, social upliftment and job creation, and to bring previously marginalized farmers into the mainstream of SA's agricultural sector.

The Land Bank is excluded from the provisions of the Bank Act.
Its objectives include
-The facilitation promotion and support of equitable ownership of land / agrarian reform / agricultural entrepreneurship
-Enhancing productivity, profitability, investment and innovation
-Programmes to stimulate the growth of the sector / promote environmental sustainability of land and related natural resources / contribute to the agricultural aspects of rural development and job creation / remove the legacy of past discrimination in the sector
-Commercial agriculture
-Food security

The Land Bank can provide microcredit in loans up to R18 000 which can be used by anyone whether in farming or not.

4.5.4 Postbank VZ p115

"Study 4.5.4 and be able to define the Postbank in about 50 words."
The Postbank is a division of the SA Post Office and is a deposit taking institution **exempted from the provisions of the Banks Act.** One of its stated objectives is to promote a culture of saving. The Postbank only takes deposits, it does not provide credit to anybody.

4.6 Micro lenders VZ p116

"Study 4.6 and be able to:"

(i) Define micro lenders in about 50 words

Micro lenders make available small amounts of credit available to low-income individuals. The loans are generally unsecured and may be required for reasons including education / home improvements / emergencies / fluctuations in cash flow / funding micro business or small business ventures / debt management / consumption

(ii) Understand exemption to the Usury Act granted to micro lenders

The objective of the Usury Act is to protect borrowers against exploitation by limiting finance charges and requiring lenders to disclose their charges. Exemption to this Act means that a new micro lending industry could be developed to provide credit to borrowers requiring small amounts of credit. Exempted loans are up to R10 000 repayable within three years.

(iii) Know that the industry is regulated by the MFRC and what its role is

The industry is regulated by the MFRC Micro Finance Regulator Council under the DTI. Micro lenders must register with the MFRC and comply with its regulations for exemption from the Usury Act and are free to determine the rates charged on their loans. Failure to comply with the rules of the MFRC results in application of the Usury Act to all further transactions.

The effects on the industry include:
-Greater formalization of the industry
-Improved understanding of the industry as the MFRC publicises the data collected from registered micro lenders and reports on issues relevant to the industry
-Expansion of the industry as retailers supply micro loans and credit sales to their customers
-Entry by banks into the industry
-Enhanced consumer awareness and action as the MFRC's education programs and complaint services take effect
-Credit expansion in support of expanding consumption spending and the possibility of over-indebtedness and debt spirals
-Possible crowding out of loan funding for income generating productive purposes such as small business investment

4.1 Basic terminology and calculations

4.1.1 Annual yield

The return in percent per annum earned by investing in a security. The return on a loan or investment, stated as a percentage of price.

Nominal annual return

The annualized return or yield earned by investing in a security without taking into account the interest that is earned on interim interest payments.

Yield = profit / consideration * (365 / d)

4.1.2 Nominal value

*"Study the terms **nominal value** and **principal** in the glossary."*

Nominal value

The face value of a financial instrument, either present or future value.

Principal

The face value, par value, or nominal value of a security.

4.1.3 Maturity

This refers to the length of the period before expiry.

Maturity date

The date at which an instrument will expire.

Maturity value

The amount that will be paid to the holder of the instrument on the date it matures.

4.2 DISCOUNT INSTRUMENTS

"Study section 10.4.1"

10.4.1 The mathematics of discount instruments VZ p239

Note the following notation:

N **nominal value**
i **discount rate per annum**
d **days to maturity / tenor / currency**
p **total price**
y **yield rate per annum**

A discount instrument is sold at a discount, which is subtracted from its nominal value. At maturity, maturity value = nominal value.

Consideration = N – (N*i * d/365) **VZ p240 F.10.1**

The yield on a discount instrument will always be slightly greater than the discount because the discount is a percentage of the nominal value and the yield is a percentage of the consideration.

Ann. Yield = discount / consideration * (365 / d) VZ p240 F.10.4

Rand percent expresses market price in terms of the price for every R100 of the nominal value of the instrument.

Rand percent price = 1 – (i * d/365)

You should be able to do the following:
Note: Formulae listed on SG p97 will be given in the exam)

-Identify the nominal value of a discount instrument
-Calculate the consideration and the discount, given the discount rate, nominal value and number of days to maturity

Consideration = N – (N * *i* * d/365)
Discount = (N * *i* * d/365)

-Explain what the term *price of a discount security* means and calculate the price given the discount rate and number of days to maturity
Price expressed as "Rand percent: 1 – (*i* * d/365) F.10.3
-Calculate the yield rate on a discount security given the discount rate and days to maturity
Ann. Yield = Discount/consideration * 365/d
You must know how to convert a yield into a discount rate.
***i* = y/(1 + y * d/365)**
Discount rate can also be calculated from the price as follows:
***i* = (1 – p) * 365/d**
You must be able to explain the difference between ***nominal annual return*** *and* ***effective annual return***. ***VZ p241***
Nominal annual return is the annualized return for e.g. a 91 day instrument.
Effective annual return for the whole year is calculated using compound interest calculations, i.e. it calculates interest on the interest earned.

See Appendix 10.2 VZ p278
Simple interest calculations
Compound interest calculations
Nominal and effective interest rates
Note that the shortest compounding period in SA is one month.

AR "You must be able to calculate future value."
(I think he means for life skills in general)
FV = PV * 1+ *i* Power n and it follows that
PV = FV / (1+*i*) Power n

Data on discount instruments are often published on a yield basis – where you know what the yield is going to be, and have to calculate the discount and price. You are expected to be able to convert a yield to a discount rate.

i = y / (1 + y * (d/365))
y = *i* * (1 + y * (d/365))
= *i* + y * *di*/365
y = y * (d*i* / 365) = *i*
y (1 – (*di*/365)) = *i*
y = *i* / (365 – d*i*) / 365
= *i* * 365 / 365 – d*i*

Understand the inverse relationship between price of instruments and yields.

4.3 INTEREST ADD-ON INSTRUMENTS VZ p242

"Study with VZ 10.4.2 and make sure that you can:"
(i) Calculate the MV of an interest add-on security given N, d and i
*(ii) Calculate **secondary market** proceeds to seller, accrued interest and capital profit/loss, given MV, d and i.*
*(iii) Calculate the **yield** to an investor if an interest add-on security trades in the **secondary market**, given amounts received, amounts paid and d.*

Interest add-on instruments are issued at par and redeemed at par + interest on the maturity date. They include NCDs, RBDs and bridging bonds. The maturity value is calculated as follows:

MV = N * (1 + (d/365 * *i*), where

MV maturity value
N nominal value (face value) of the security
d days to maturity
i interest rate p.a.

Be able to calculate the consideration of an interest add-on instrument, given MV, d, i. SG p79.
*Be able to calculate the consideration of an add-on instrument traded in the **secondary market**, SG p80.*
*Be able to identify and calculate **accrued interest** and **capital profit or loss**.*
Accrued interest = amount paid * (d/365 * interest rate)
Capital profit/loss = Total income – Accrued interest
Annual yield = profit / consideration * 365 / d

Summary comparison of instruments:

	Discount Instrument	**Interest Add-On Instrument**
i	*% interest to be deducted from nominal value*	*% interest to be added to nominal value*
Consideration (when issued)	***N - (N*i*d/365)***	***N, issued at par***
Consideration (in secondary market)	***N – (N*i*d/365)***	***MV / (1 + d/365 * i)***
Return *y*	*discount/ consideration * 365/d*	*profit/ consideration * 365/d*
Maturity Value MV	**N**	**N * (1 + d/365 * *i*)**

Study guide p82 gives good representation of all the above.

4.4 REPURCHASE AGREEMENTS

*"Study only the section headed **Repo mathematics** in 10.5.5"*

10.5.5 Repo mathematics VZ p266

Repo interest is paid on an add-on basis calculated on a 365-day year. Cash paid by the buyer and received by the seller in the first leg of a repo is based on the market value (**AIP, All-In Price)** of the bonds on that date.

Consideration (leg 1) = Nominal value of bonds * (AIP of bond)
e.g. SG p85 R5m * R102,5% = R5125000 leg 1
Consideration (leg 2) = Consideration (leg 1) + (i * d/365)
e.g. SG p85 R5 125 000 + (10/100 * 7/365)

4.5 BOND INSTRUMENTS

11.1 Introduction VZ p285

"Study 11.1 and make sure that you can:"
**** SG p285 Briefly discuss the flow of funds relating to a bond over its life*
Calculate the coupon on a bond, given coupon rate and Principal
Define a bond:
A bond is a financial instrument that promises that the issuer (borrower / deficit unit) will pay the holder interest and will repay the capital amount after a certain period of time. Bonds are **debt** to the issuer and can be traded, a marketable instrument. Once traded, coupon payments accrue to the new bondholder from the date of sale, and outstanding coupon payments are taken into account when the purchase price is calculated.

Name and briefly define the components of a bond
The Principal is the amount to be repaid, also called face value, par value, nominal value.
Coupon rate is the interest rate promised by the issuer to the bondholder during the life of the bond, normally expressed as a % per annum and may be a fixed or variable interest rate, normally **fixed.** Variable interest rate bonds are known as **floating rate notes** and the rate is pegged to a benchmark e.g. repo rate**.**
Coupon frequency refers to the frequency of interest payments, usually yearly or six-monthly.
Coupon payments are the interest payments made by the issuer to the bondholder at the required coupon frequency. If the coupon rate is variable, it is normally pegged to some rate like the prime rate or to an index like the CPI.
Maturity date is the expiry of the bond when the Principal must be repaid by the issuer to the bondholder.
The **price** at which bonds are issued are determined by current market interest rates.
Annual interest amount = nominal value * coupon rate (interest rate)

There is an inverse relationship between the interest rate and the price of bonds as illustrated in Study Guide p 87. When the price of a bond **increases** the annual yield **decreases**, and vice versa.

If six-monthly coupon payments are made, each will be half the annual interest amount calculated.

11.2 Prices and yields on bonds

11.2.1 Inverse relationship between bond prices and yields VZ p286

"Study 11.2.1 and make sure you can:"
*Calculate the **running yield** on a bond, given annual income and consideration*
*Explain the **inverse relationship** between the price of a bond and the running yield on the bond*
*Explain how the **price of a bond is expressed** and what it means (R98%)*

The **running yield** on the bond is calculated by expressing the coupon payment as a percentage of the purchase price. Seeing that coupon payment and maturity value are fixed, a coupon payment of R100 000 divided by a higher figure will produce a lower percentage yield than when divided by a lower figure.

*Define the **yield to maturity** (no calculations required)*
Yield to maturity is the interest rate which makes the present value of the bond's cash flow equal to the bond's market price, **if the bond is held to maturity**. **All** cash flows are taken into account when calculating yield to maturity.

The bond cash flow consists of three elements:
Coupon interest
Compound interest, the interest which would be earned on interest paid if it were reinvested
Capital gain/loss

See VZ p288 F.11.3 for the calculation of Yield to Maturity (i).
As the yield to maturity declines, the price of the bond rises.

For a bond with a nominal value of R1 000 000:
If the bond price is R100%, the bond trades **at par** and costs R1m.
If the price is R95%, the bond trades **at a discount** and costs R950 000.
If the price is R102%, the bond trades **at a premium** and costs R1,08m.

If the bond is bought **at par** the buyer pays the nominal value.

11.2.2 The clean price, accrued interest and all-in price of a bond SG p86

"Study 11.2.2 and make sure you can:"
*Explain how the **price of a bond is expressed** and what it means (R98%)*

Coupon interest on bonds is almost always paid twice-yearly.
LCD refers to last coupon date and **NCD** is the next coupon date.
When bonds are traded in the secondary market, accrued interest also has to be taken into account. The **all-in price** is the amount to be paid by a

new bondholder in the secondary market and comprises the **clean price** and the **amount of interest** to be **added** or **subtracted.**

A **bond register** keeps track of current bondholders and closes between 10 and 30 days before the coupon payment date; the date of closing is called the **books closed date BCD** and the day before the **BCD** is called the **last date to register LDR**. The bondholder **at LDR** will receive the coupon payment on the next coupon payment date.

The difference which would accrue to a previous bondholder in the case of a bond trade, is calculated and added to the price paid to him at trade.

The **clean price** is the consideration without the addition of any such interest calculations, which represents the **all-in price** or **dirty price**.
All-in price (dirty price) = Clean price + / - interest
Depending on the dates and the transaction, the all-in price may be **minus** interest.

Explain ex interest and cum interest
Ex interest is when the bond is sold after BCD before next coupon date - the interest is subtracted from the price paid to the new bondholder
Cum interest is when the bond is sold before BCD after LCD - interest is added to the clean price for payment to the new bondholder.
See Activity 7.4, draw it out on a line showing the dates if you get this in the exam, it helps to work it out.

Do Activity 7.1
Do Activity 7.2
Do Activity 7.3

4.5 FACTORS AFFECTING THE PRICES of financial instruments

"You have to be able to discuss factors that affect the price of bonds and you should also be able to apply them."
"You have to understand the expectations theory of the yield curve."
According to the **expectations theory** the level of long-term interest rates is determined by current short-term rates and expectations concerning future short-term rates. Blah blah study guide p93. The most important point:
If interest rates are expected to increase in future, the yield curve will be upward sloping i.e. the yield on long-term bonds will be higher than the yield on short-term bonds. Similarly a downward sloping yield curve indicates that interest rates are expected to fall in the future.

"Study 11.3 and 9.7.2"

11.3 Factors affecting the interest rate on bonds VZ p296 (referring specifically to fixed interest bonds)

(AR) If you are a risk averter you will buy short term bonds because you don't want the risk of interest rate fluctuations.

(AR) Income seekers invest in long-term bonds.
(AR) If you expect short-term rates to increase over e.g. 2 years from 10% to 14% you would expect the interest rate to be 12% in the middle of that period. If you are 95% sure that the interest rate will be 14% in 2009 the real interest rate will be 95 * 14%. The yield curve relates to people looking for income or those trying to avert risk.

11.3.1 Market interest rate levels

Must be in line with interest rates generally on other financial assets

11.3.2 Maturity

The relationship between maturity of a bond and its yield is called **the term structure of interest rates,** which is always indicated for a particular date.
An upward sloping yield curve indicates that the longer the term to maturity, the higher the yield on the bond. The ascending slope indicates the **liquidity premium** which means that the issuer is prepared to pay a premium to the investor to convince him to make the investment in a particular bond.
A flat yield curve indicates that bonds with different maturities yield equal returns.

9.7.2 Uses of the yield curve VZ p223

Investors should base investment decisions not on **current** but on **future** interest rates. The yield curve is used to forecast interest rate movements, critical to successful investment. Both financing and investment decisions are influenced by increases or decreases in interest rates. In South Africa the ability to forecast interest rates accurately is limited by the presence of relatively fewer fixed interest securities than in the USA.

Financing decisions

Increased interest rates means increased cost of capital of firms, making new investments less attractive.
The slope of the yield curve is critical for the financing of financial institutions such as banks, who borrow most of their funds on short-term deposits and lend a major portion of these on a longer-term basis. The steeper the upward slope of the yield curve, the greater the spread between borrowing and lending rates, thus the greater the profitability of the banks. (The converse is also true.) Banks may try to maximize such a position by encouraging long-term deposits and fixing interest rates on long-term loans.

Investment decisions

The inverse relationship between the interest rate and the value of financial securities means that an increase in interest rates causes a drop in a security's value and a decrease in interest rates causes an increase in the value of securities. This is because the only factor in the model that changes is the required return, or discount rate.

11.3.3 Expectations VZ p298

If interest rates are expected to increase, people will wait to buy long-term bonds so that they pay the lower price. Sellers in this situation will have to offer a premium to make a purchase

attractive to investors.
If interest rates are expected to fall, people will be unwilling to invest in short-term bonds and will prefer to invest in long-term bonds in order not to lose. Sellers of short-term bonds will have to offer a premium, resulting in a descending yield curve.

11.3.4 Market forces

An increased demand will increase prices and lower yields on short-term bonds. The laws of demand and supply prevail in determining price.

11.3.5 Issuer

The quality of the issuer affects the risk of default. Borrowers of high credit quality can offer a lower risk premium, those of lower credit quality must pay higher interest to compensate investors for the additional risk they bear.
Credit agencies provide ratings on issuers which are regularly revised and adjusted.

(AR) MAKE SURE THAT YOU KNOW HOW TO USE THE FORMULAE IN THE EXAM

Revise formula 10.7 VZ p241 and pay attention to 10.8

Know which instruments are add-on and discount instruments.

5.1 THE MONEY MARKET

5.1.1 Overview

Read Sections 10.2.4, 10.2.5, 10.2.7
Make sure you understand the terms

10.2.4 Classification of money market securities VZ p234

Reversability or **marketability** refers to the ease with which holders of securities or claims can recover their investments, either by recourse to the issuer or by recourse to the secondary market.
Bankers' acceptances and Treasury bills are reversible money market securities.
Nonmarketable instruments are the opposite of reversible securities e.g. a personal IOU or a company's call deposit at a bank.
Examples of marketable money market securities are:

- **Primary securities issued by private sector** include trade bills, BAs, promissory notes, company debentures.
- **Primary securities issued by public and semi public sector** include Treasury Bills TBs, bridging bonds and capital project bills.
- **Indirect securities issued by financial intermediaries** include private banks' liabilities i.e. NCDs, the liabilities of public and semi public banks, i.e. RBDs, Land Bank Bills LBBs and Land Bank promissory notes as well as the liabilities of other institutions e.g. SA Housing Trust bills.

10.2.5 Primary and secondary money market VZ p235

Nonmarketable securities have only primary markets whereas marketable securities have both primary and secondary markets.

10.2.7 The relationship between the bond and the money markets

Bond market is where long term financial instruments are issued and traded, i.e. over twelve months. Note that where a bond is issued for 20 years, if after 19 years it has a maturity of one year, it **could** be regarded as a money market instrument. **However** in practice such bonds continue to be traded in the bond market. Note also that other short term instruments like NCDs are usually issued for under 12 months and where issued for longer periods they are still considered money market instruments.

Study the two introductory paragraphs of 10.2
*Make sure you can define the term **money market.***
You should be able to distinguish the different markets.

10.2 What is the money market? VZ p230

.. an environment where economic entities from the household, government and business sectors requiring short-term funds meet those who have surplus funds, and engage in various forms of lending and borrowing.
Short-term refers to any period up to 12 months.
Lending and borrowing is achieved either through **indirect financing,** which involves a financial intermediary, or **direct financing**, without the help of a financial intermediary. In the process, new financial instruments / debt instruments / securities are created for subsequent trading in the money market.
The creation of a money market security always requires the borrower to compensate the lender in the form of interest.

The party issuing a security is **borrowing** money and therefore incurs a financial **claim** or **liability** against itself from the buyer of the security who is an investor and acquires a financial asset.

Study Section 10.2.2

10.2.2 Wholesale/retail market VZ p231

The term **money market** refers only to the wholesale part of the market which is that part of the short-term securities market dealing in instruments with large denominations.

Study Section 10.2.3 and make sure that you can:
Distinguish between ultimate borrowers and financial intermediaries as borrowers
Discuss the roles of the different sectors (household, corporate, foreign and government) as ultimate borrowers in the money market
Distinguish between primary securities and indirect securities
Discuss the roles of the different sectors (household, corporate, foreign and government) as ultimate lenders in the money market
Discuss the roles of banks and other financial intermediaries as both lenders and borrowers in the money market
Distinguish between brokers and dealers

10.2.3 Participants VZ p231

- Banks play the most prominent role in the SA money market acting as financial intermediaries. Banks are also the main medium through which the SARB intervenes in the SA money market.
- Any entity or individual with a surplus supply of funds can supply funds to the money market, e.g. temporary surplus in anticipation of a company paying its tax or temporary surplus in a local authority for a short term.
- Commercial banks, the Land Bank and companies borrow funds via instruments like promissory notes, capital project bills, bridging bonds, other commercial paper, bankers' acceptances.
- The SARB subsidiary the CPD invests short term surplus funds from various bodies in the public sector. The SARB accommodates the banking system to deal with cash shortages and by doing so materially affects conditions in the local money market.
- The PIC invests pension funds of public sector employees.
- Long-term insurers, private pension/provident funds, parastatals all invest and/or borrow funds in the money market.
- No material role is played in the money market by foreign investors.
- **The participants are formally classified as**

Borrowers (issuers or first-time sellers of securities)

(i) Ultimate borrowers
Government and corporate sectors, issuing **primary securities**. Central government issues Treasury Bills. Public corporations issue commercial paper bills e.g. Eskom commercial paper bills, Telkom commercial paper bills, Transnet bearer coupon bonds, SA National Roads Agency bridging bonds.

(ii) Financial intermediaries issue **indirect securities and are either** Deposit intermediaries (banking entities) or nondeposit intermediaries (insurers, pension funds, etc.)

Direct financing occurs where some large companies and parastatals borrow funds by selling short term commercial paper directly to investors.

Lenders (holders or buyers)

(i) Ultimate lenders

The largest ultimate lender in the money market is the corporate sector.

(ii) Financial intermediaries (buyers or sellers)

- Deposit intermediaries comprising mostly the banks who invest in NCDs, the CPD which invests in TBs and the SARB. Note the SARB "invests" in the money market to provide liquidity to the banks and not to generate returns.
- Nondeposit intermediaries such as pension funds, the PIC and collective investment schemes such as unit trusts.
- Quasifinancial intermediaries are investment trusts, private equity funds, securitization vehicles, savings and credit cooperatives, friendly societies, microlenders, buying associations and stokvels.

Brokers (match buyers' and sellers' requirements for a commission)

Acts as an agent and tries to match the orders of buyers and sellers without taking ownership of securities. A broker is distinguished from a **dealer** who is ready to buy and sell securities from his own account, taking the risks and being market makers in securities.

A **jobber** is a dealer who buys and sells securities on a very short-term speculative basis.

Study Section 10.2.6 and make sure you can discuss the roles of the interbank market and the derivatives market in money market activities.

10.2.6 Other money market activities VZ p235

The two markets described below do not involve new lending or borrowing but merely assist the process. In the **derivatives** market existing money market and capital market instruments are used as underlying assets whereas the interbank market involves shifting existing funds between banks.

The interbank market plays a pivotal role in the implementation of monetary policy because interbank and other money market interest rates respond immediately to changes in the SARB interest rate.

Interbank rates range from overnight rates to the longest, twelve-month JIBAR Johannesburg Interbank Agreed Rate. Overnight call rates are particularly sensitive to liquidity conditions in the banking system. The rates usually change on a daily basis and vary between the banks.

Study Section 10.2.8. You should be able to discuss the following briefly.

10.2.8 The regulatory structure of the money market

In SA the money market is self regulated and not subject to any specific legislation, relying on mutual trust between market participants.

Such an informal, unregulated market is known as an **over-the-counter OTC** market in contrast with formalized markets like the Bond Exchange of SA BESA.

Securities are bought over the counter. Money market brokers are normally members of one or more of the formal exchanges and the JSE securities exchange rules also cover most money market transactions. However money market transactions are not guaranteed by an exchange which means that default risks exist.

5.1.2 Money market instruments

You must know which instruments are discount, which are interest add-on and which relate to repurchase agreements.

The activities in this section are the way in which questions on this topic will be asked in the exam.

Treasury bills	Discount instrument
Reserve Bank debentures	Interest add-on instrument
Bankers' Acceptances	Discount instrument
Negotiable Certs of Deposit	Interest add-on instrument
Repurchase Agreements	

Study 10.3 and make sure you can define the following:

10.3 Specific features of money market instruments VZ p237

- Bearer instrument

A security not registered in the books of the issuer so there is no record of ownership. It can be sold or redeemed at maturity merely on presentation by the bearer, the current owner.

- Liquid assets

TBs, RBDs and LBBs are the only money market instruments qualifying as liquid assets in terms of prudential banking requirements.

- Reserve Bank collateral

The above instruments may be pledged by banks as collateral assets when making use of accommodation from the SARB under the repo system.

- Immobilisation

The SA financial system has transformed securities from paper to electronic format, in two ways. Immobilisation refers to scrip (subscription receipts) being held in a central securities depository CSD, on a voluntary basis.

- Dematerialisation

Under this form securities are traded without physical certificates; ownership of a security exists only as an electronic accounting record. Both the above facilitate trading, payment and transfer of ownership of shares, bringing about a reduction in admin costs to all parties.

- Central securities depository CSD

A CSD is a computerized custodial service for securities which holds scrip in custody and facilitates transfer of ownership electronically within the depository system.

Virtually all **listed bonds** (government, semi-government and private sector bonds are immobilized in the **Central Depository CD** owned by the clearing banks. The CD's functions include immobilization of scrip, electronic settlement of scrip, payment of interest and redemption values and electronic pledging of scrip as collateral.

The SARB operates the **Financial Instrument Register FIR** which records all **TBs and RDBs** issued. It also keeps a record of **LBBs and**

government bonds which have been pledged as **collateral to SARB** by the banks.

- SWIFT Society for Worldwide Interbank Financial Telecomms

Supplies secure messaging and interface software to thousands of financial institutions in over 200 countries. Clients include banks, broker-dealers, investment managers, also market infrastructures in payments treasury, derivatives, securities and trade services. Also the messaging hub for high value payment systems, securities infrastructures and foreign exchange settlement systems. Virtually all financial institutions involved in the local money market subscribe to SWIFT, including the SARB.

- Short and long positions

If a dealer has R10m of TBs in stock, he is said to be "**long** R10m in TBs." because he has them **in hand.**

A **short position** refers to a situation where a security has been sold and has to be covered by a corresponding purchase, often done in anticipation of a drop in prices.

Study Section 10.5 and summarise the information indicated.

10.5 The instruments of the money market VZ p244

The various securities traded in the SA money market incude TBs, BAs, NCDs, RBDs, repurchase agreements, LBBs and commercial paper.

10.5.1 Treasury Bills VZ p245 Discount Instrument

Make sure you can define a TB

A Treasury Bill is a discount instrument and is a short-term money market instrument issued by government, representing a claim on government while constituting a safe and simple security, normally having a maturity of 91 and 182 days.

Why does the government issue TBs?

Government issues TBs to help finance government deficits and also to fund maturing issues. TB interest rates serve as a benchmark indicator of money market conditions and act as a reference rate for the calculation of interest rates on a number of other money market assets.

Calculations on TBs, which are discount instruments

The primary issue of TBs are auctioned on a price basis.

Prices are expressed as a **Rand percent** rate and are rounded to the nearest half percent while the calculations are correct to **five decimal places**. E.g. 0,96 896 becomes R96,896% and is rounded to R96,895%.

Settlement date is three days after the bidder's tender is accepted.

The yield is slightly higher than the interest rate

And is calculated as discount amount/consideration * 365/d

Yield on TBs is slightly lower than on other money market assets because they are guaranteed by government and because their tradability is high. They can be used as collateral on short-term loans from the SARB.

Describe the primary market for TBs

The **SA Government issues TBs** and the National Treasury determines the annual value to be issued.

The weekly tender is held by the **Financial Markets Department of the SARB** on behalf of the **National Treasury**, on a Friday. Settlement is the following Wednesday.

The procedure used follows the competitive **American system** where amounts are allotted in descending order of price. The highest bidder is allotted in full and this continues until the entire amount on offer is taken up. The SARB reserves the right to reject any bid or part thereof for any reason whatsoever.

The secondary market

Is limited because TBs are highly sought after liquid assets and are normally held to maturity, however trade in the secondary market **does** take place.

A price-maker is a dealer who maintains a firm **two-way price (buying and selling price)** in a security, being ready to buy or sell at the relevant publicly quoted price, i.e. he is making a market.

A price-taker is the client who has to accept the quoted price or go to another dealer.

A bid-offer spread is a buy-sell spread**,** the spread representing the difference between the buying and the selling price by the market maker, and therefore represents the profit made by the dealer.

In the secondary market, TB prices are normally given in terms of discount interest rate. If the discount rate is converted to a R% price, the selling price is higher than the buying price, same as secondhand cars.

Explain how TBs are redeemed on their maturity date

At maturity the SARB makes two separate payments (potentially) to each bank, one for the bank itself and to the Bank's account for TBs held for its clients. Each bank is responsible for crediting their clients' accounts **on the same day**.

MUST DO Activity 2

Make sure you understand where every variable comes from at the bottom of page 105 in the study guide

AR Explain the yield

I think there is something wrong with the equation at bottom of SG p103, can somebody else please also check it and tell me if I am wrong?

10.5.2 RBDs Reserve Bank Debentures VZ p250

Study 10.5.2 and make sure that you can:

Define a RDB

An RDB is a short-term transferable security issued by the RB as a supplementary facility for banking institutions to invest surplus short-term funds. The RB pays the principal PLUS the interest on the specified redemption date.

Explain why RDBs are issued

RDBs are issued to manage money market liquidity by monetary control. Issuing RDBs drains liquidity from banks, increasing the **liquidity shortage**, and their redemption restores the status quo.

Characteristics of RDBs

RDBs are issued to manage money market liquidity by monetary control. Issuing RDBs drains liquidity from banks, increasing the **liquidity shortage**, and their redemption restores the status quo.

RDBs are short-term **interest add-on securities issued at par** to a purchaser, either a bank or a member of the public. Interest is paid **at**

maturity. In theory, RDBs may be issued for a year but currently there are a 28-day and a 56-day maturity. The SARB **may redeem the RDBs prior to maturity, at its own discretion**. RDBs are issued in multiplies of **R1m.**

RDBs are prescribed liquid assets for banks and may be used as collateral for Central Bank accommodation.

RDBs were dematerialized, first of all financial instruments, in October 2001, and no paper scrip is available; all RDB transactions are tracked electronically by the FIR.

Do calculations on RDBs

Understand the primary market for RDBs and the Tender procedure

Primary issues of RDBS require auction on a yield basis. At maturity the RDB holder must be paid the Principal plus interest for the period.

Tenders are held weekly and invitations are issued on the morning of that day and tenders may be submitted on paper or electronically.

RDBs must be settled on the **same day** as Tender acceptance.

RDBs are auctioned on a **yield basis** and thus tenders are allotted in **ascending** order of yields so that the tenderers accepting the lowest yield *will be allotted first. The American style is adopted here, too.*

Understand why the secondary market is limited

The secondary market is limited owing to the short maturities and the fact that RDBs qualify as liquid assets for banks and may be used as collateral where banks seek SARB accommodation.

Redemption

The SARB facilitates payments to all RDB holders on the maturity date. Banks receive two separate payments, one for their own holdings and one for RDBs held on behalf of their clients.

MUST DO Activity 3

10.5.3 Bankers' Acceptances (a primary security) (a discount instrument) VZ p253

Study 10.5.3 and make sure that you can

Define a BA (not expected to be able to define Bills of Exchange but read through that section to help you understand the BA)

A BA is a discount money market instrument issued by the private sector. It is formally defined as a **bill of exchange** drawn on and accepted by a bank; an instrument of great simplicity and high quality which can easily be traded in a developed secondary market.

A bill of exchange is a negotiable security containing an unconditional order by the drawer for the drawee to pay a fixed sum of money to a person or his order upon maturity. If in agreement, the debtor signs the Bill of Exchange. The instrument has been in use for centuries and had particular application in allowing exporters to get cash immediately after sending off their goods, while the importer did not have to pay until some future date, either once their goods had been landed or sold.

Explain why BAs are created

BAs are bills of exchange drawn on and accepted **by banks**. They are created by anybody requiring short-term finance, drawing a bill of exchange on his banker. The banker undertakes to pay the company

requiring finance (or order) a certain sum of money after a certain period, **accepting** the bill by signing across its face and making a BA. The company requiring finance endorses the BA in blank thereby making it payable to bearer and enabling its sale in the market at the ruling discount rate.

The BA may be sold repeatedly until maturity at the ruling BA discount rate. Whoever holds the BA at maturity receives the full face value from the original bank. The accepting bank charges a commission to the borrower, mainly determined by risk.

Most BAs are issued for 91 days, most usually in multiples of R100 000 and R1m. BA business is managed by the Treasury divisions of banks. Banks earn commission on each new BA accepted.

BAs are created to finance the purchase, manufacture, movement etc. of goods and are secured by the proceeds arising from the sale of those goods.

Explain the life cycle of a BA using an example

Company MDM requires trade finance to service a large order.

1. Applies for credit facility, bank issues Letter of Credit
2. MDM draws bill on bank (completes details, endorses it in blank)
3. Bank accepts bill and discounts BA at all-in rate, credits MDM.
4. MDM purchases timber from sawmill and starts manufacture.
5. Furniture is delivered, cash starts coming in.
6. Bank sells BA in secondary market at a discount.
7. BA presented for payment on maturity date.
8. MDM repays bank full FV of BA on maturity.

Do calculations involving BAs

Do Activity 4

Know that BAs are being replaced by other short-term instruments

The SARB repealed the liquid assets status of the BA in the early 1990s and thus their appeal waned.

BAs are subject to the same clearing system as cheques and are processed at the end of a day.

Explain what the BA rate is and its significance

The BA Rate is the interest rate on BAs and reflects the cost of short-term corporate finance, being influenced directly by changes in the interest rates on securities like promissory notes and other commercial paper.

A declining BA rate should indicate an expected easing of money market conditions while a rising BA rate would indicate the opposite.

BAs are a secure investment when accepted by a large bank. BAs, while still not immobilized, are bearer instruments and must be handed over when sold.

10.5.4 Negotiable certificates of deposit NCDs (indirect security) (interest add-on instrument) VZ p258

Study 10.5.4 and make sure that you can:

Define an NCD

An NCD is a financial instrument (receipt) issued by banks and acknowledging the deposit of a sum of money for a period of time and at a fixed interest rate. An NCD can be sold before maturity and is thus

tradable in the secondary market. NCDs are issued at par value and redeemed at par + interest.

Explain who issues NCDs and why

NCDs are issued to attract deposits to supplement banks' funding requirements, the amount of which was 14% of total deposits in September 2004. Some of the most important investors in NCDs are the banks themselves, this activity forming part of interbank funding.

Describe the characteristics of NCDs

NCDs are issued for periods of 3 6 9 and 12 months. Some NCDs are issued for five years or longer but these become capital market instruments.

Amount of deposit is in multiples of R1m.

NCDs carry a maturity date and an interest rate p.a.

NCDs do not qualify as liquid assets or collateral for SARB accommodation.

Do calculations involving NCDs

Do Activity 5

10.5.5 Repurchase agreements (repos) VZ p260

Study Section 10.5.5 and make sure that you can:

Define a repo

A repo is a sale of assets and a simultaneous agreement to repurchase the equivalent assets at a future date or on demand for the original value plus a return on the cash VZ p261

Distinguish between the two legs of the repo transaction

As a result we have two legs in the transaction and two parties in each leg.

Leg One: The seller of the assets is the borrower of money, the buyer is the lender of funds and the new owner of the security. The price paid is the **purchase price**.

Leg Two: The seller repurchases the security from the buyer and compensates him for the time the money was borrowed; this interest rate is the **repo rate** and was determined at the beginning of leg one. The price including interest is the **repurchase price**.

Explain "collateral" and the situation concerning collateral assets during a repo transaction

A repo constitutes the legal sale of the collateral assets. For the term of the repo, the legal and beneficial title of the collateral is transferred to the buyer to do with as he pleases, even selling it. However when the repo terminates the seller must be returned to his original position. Risk and return on the collateral asset is retained by the seller relative to income returns on the asset during the repo.

Distinguish between repurchase and reverse repurchase agreements

A repo for the seller is a reverse repo for the buyer. Confusion can be avoided by seeing the buyer and seller of the asset in the first leg as the key participants. The seller agrees to **repurchase** the asset, the buyer agrees to **resell** it. The buyer is entering into a resale or **reverse repo agreement**.

Describe the reasons for using repos

1. Cash driven deals:
   Selling securities to obtain funding. Repos may be used to fund the

purchase of the bonds which are used as collateral. If a fund manager expects a fall in long-term interest rates, he may purchase a bond and immediately "repo it out" to another party in order to pay for the bond transaction. When bond rates fall, his portfolio value rises and the capital gain accrues to him, the repo seller, not to the buyer of the bond under the repo.

Note the repo rate is usually **lower** than money market rates because repo lending is collateralized whereas conventional interbank lending is unsecured.

2. Cash driven deals (2):
   Buying securities to earn a return on surplus cash. Bank A has surplus cash, buys securities from Bank B, agreeing to sell them back after a stated period. This is a reverse repo. Such transactions take place between the commercial banks and also between the commercial banks and the SARB, the SARB requiring the decrease excess cash holdings of the Banks.

3. Bond driven:
   Buying securities to obtain liquid assets or to cover short bond positions. If Bank A finds itself short of liquid assets, it can enter into a reverse repo with Bank B to obtain the necessary scrip for a period.
   Note the 5% limit on repos in the amount of prescribed liquid assets.

   A bank that has sold bonds short may need to settle on the settlement date with a body like BESA and needs to obtain the bonds on a temporary basis for this purpose.

The majority of repo transactions are security driven as in (3) above rather than cash driven.

Do calculations concerning repos (See SG 4.4)

See Repo mathematics VZ p266

Other money market instruments

Define them, know who issues them and why, whether they are discount or interest add-on instruments

10.5.6 Land Bank Bills VZ p267

A short-term discount security
issued by the Land Bank
to provide short-term finance to agricultural cooperatives
discount instrument
may qualify as liquid assets for prudential requirements of Banks
may be used as collateral assets for SARB accommodation

10.5.7 Commercial paper VZ p268

Many corporates, parastatals and other nonbanking institutions borrow by issuing short-term paper, collectively known as CP commercial paper. The issuing of CP is regulated.

Traditionally CP refers to short-term unsecured debt obligations (IOUs) issued by highly rated incorporated companies to obtain short-term bridging finance. Because they are unsecured, the risk involved will be

higher than that of BAs and therefore the issuing company must be financially strong and sound. They therefore trade at higher discount rates than the prevailing BA discount rate.
Two types of CP: Those issued by listed companies and those listed by unlisted companies.
CP is issued in bearer form and on a **discount** basis.

10.5.8 Promissory notes VZ p270

A PN is an unconditional signed promise made in writing by one person to another, undertaking to pay on demand or at a fixed future date a certain sum of money to a specified person or his order, or to bearer.
A PN is usually used to raise short-term finance, usually 3 to 6 months.
A PN is used to acquire finance of a non liquidating nature.
Usually created in denominations of R1m and may not be split into smaller units., usually 3 to 6 months.
A PN is used to acquire finance of a non liquidating nature.
Usually created in denominations of R1m and may not be split into smaller units.
Used to be discount instruments since 2003 when stamp duty was removed, have been issued on an interest-add-on basis.

10.5.9 Capital project bills VZ p272

Short-term securities
Discount instruments
Issued by large companies or parastatals to raise funds for the maintenance of certain capital projects e.g. by Eskom for the generation of electricity.

10.5.10 SA National Roads Agency Limited Bridging bonds VZ p273

Interest add-on instrument
Known as Roads Board Bridging Bonds RBBBs
Short-term unsecured securities
Issued by SA National Roads Agency Limited on a Tender basis
To fund the shortfall between revenue and capital expenditure
Bearer instruments
Usually issued for three months
Issued in multiples of R1m

10.5.11 Transnet Coupon Stocks VZ p273

Interest add-on instrument
Unsecured short-term securities
Issued by Transnet
To fund the shortfall between revenue and expenditure
Not issued regularly

5.2 THE CAPITAL MARKET

This is the market where financial instruments are traded whose maturity is a year or more. Some capital market instruments like **bonds** have maturity dates. Others like **shares** are **perpetual instruments** because they do not have a maturity date.

5.2.1 The Bond Market

Listed bonds are traded on the Bond Exchange of South Africa **BESA**.

11.5 Market for government bonds VZ p303

Study 11.5 and make sure that you can:

11.5.1 Discuss the different types of bonds issued by the SA Government (you do not have to know the bond codes)

Most of the bonds traded on BESA are issued by central government. There are different types including:

Fixed rate bonds

Fixed coupon rate

Single maturity date, or

More than one maturity date: The principal will be repaid according to a schedule. A bond like the R194 with three maturity dates is called a three-legged bond, where interest payments stop on the redeemed amounts. New loan numbers are issued for the residual amounts.

Zero-coupon bonds

Only one cash payment is made, the principal, at maturity. The issuing price is very low (R15.970% in the example).

Inflation linked bonds

Government bonds which compensate holders for inflation. They are indexed to headline inflation with interest adjusted after a three month lag. At maturity the SA Government pays the bondholder the capital value of the bond; however if the capital value is lower than the principal, the issuer pays the shortfall.

Variable rate bonds

Coupon fluctuates with some predetermined benchmark rate, like the ruling effective interest rate on the 19-day TB.

Foreign currency bonds

Are issued by private placement, where new bonds are sold directly to one or a few investors rather than through public offering;
or by listing on a foreign bond exchange, lead managers appointed and the bonds are issued through auction to the highest bidders. The lead managers act as primary dealers and market makers although these bonds are often held by the primary buyers to maturity.

11.5.1 ***Discuss the process of stripping government bonds VZ p305***

Separate **T**rading of **R**egistered **I**nterest and **P**rincipal of **S**ecurities.
This process separates a standard coupon bond into its component interest and principal payments, so that they can be separately held or traded. This enhances the liquidity of government securities and provides benchmark rates for maturities where no government bonds are available.

Consider a bond with twenty payments at six-monthly intervals followed by a final payment of the principal. When the bond is stripped, each payment becomes a separate zero-coupon bond which can be traded separately. Twenty-one strips are thus created. The cashflow arising from the transaction remains unchanged. C-strips are the coupon strips and P-strips are the Principal strips.

All the bonds designated for stripping are three-legged bonds, i.e. those with three Principal repayment dates.

Reconstitution is the process of reassembling a bond which was previously stripped.

Explain the procedure of issuing government bonds (you do not have to know table 11.10)

11.5.2 Primary market and issuing procedures VZ p306

Since 1998 the Treasury has used a system of Primary Dealers to issue government bonds. Government bonds are issued through regular auctions with the SARB as agent, and issued only to primary dealers. \

Rules: A primary dealer must be a reputable banking institution or a foreign bank with a SA registered branch, and must be a member of BESA. Applications for primary dealership are made in writing to the National Treasury with confirmation that the applicant is compliant with the rules and has aligned its business to a long-term commitment iro being a primary dealer in government bonds.

Auctions take place via a calendar announced, along with the types and annual amounts of bonds to be issued, at the start of a financial year. Auctions are held on a Tuesday; if it is a public holiday the auction takes place the next business day.

Primary dealers must participate actively by bidding at market related yields on a competitive basis, each primary dealer being obliged to bid for a certain **minimum of the total** bonds auctioned, the amount being:
1 / 9 dealers = 11.11% + 2% rounded to the nearest 1% = 13%.
A single dealer is not allowed to bid for more than 40% of the amount of any bond offered.

The invitations to tender include:
Type of bonds and amounts
Closing time for bids
Announcement time of results

Results are publicly made and details include:
Amounts allocated
Number and amount of bids received
Number of successful bids
Highest, lowest and average yielding bid allocated
Percentage allocation at cut-off yield

Financial settlement must be effected three days after the auction, "t+3"

Discuss the secondary market for government bonds

11.5.3 Secondary market VZ p308

Dealers stand ready to buy and sell financial assets for their own account. Two prices are quoted, a **bid price, the price for which they will buy** and an **ask price, the price for which they will sell.**
Appointed dealers in SA government bonds are required to quote continuous two-way prices in seven key government bonds and to stand committed to deal in R10m lots of all liquid government bonds.
Brokers act as agents for their clients and charge a fee called **brokerage**.

Buyers include dealing banks, insurance companies, retirement funds, investment companies.
The secondary market is rather liquid in government bonds, which make up most of the bond market in SA.

Make sure that you can answer short questions on the municipal bond market

11.6 Market for municipal bonds

These are bonds issued by local governments; the market for them in SA is rather limited, only three municipal bonds being listed on BESA. The market is limited due to a perception that municipalities are not perceived to be sustainable entities due to a history of nonpayment for services by communities. There is no tax exemption on municipal bonds in SA as there is in the USA. Smaller municipalities are also financed through the bond market, indirectly via INCA the Infrastructure Finance Corporated Limited, a private sector organization that provides long-term loans to finance infrastructure provided by local government.

Make sure that you can answer short questions on the markets for parastatal and water authorities bonds. You do not have to know table 11.12

11.7 Markets for parastatal and water authorities bonds

These bonds are normally sold to finance capital projects by such entities as Eskom. SA parastatals rely to a large extent on traded debt, i.e. bonds as a source of finance.

Study 11.8 and make sure that you can
Discuss the advantages of a well-developed corporate bond market

Only about 23% of bonds traded on BESA are corporate bonds, making the market rather small. Advantages of a well developed cb market:

- It may contribute to a sound financial system and economic stability because during a financial crisis bond prices drop, providing an automatic disincentive to withdraw funds from that economy. Withdrawal from the bond market is less damaging to the economy as a whole since banks' balance sheets are not so severely drained.
- The cb market provides long-term fixed interest debt
- A well developed cb market will provide an alternative for bank credit and an alternataive investment option, also an option whereby banks can raise additional capital.
- It will provide a more transparent reference for pricing corporate credit risk.

Discuss the fundamentals that will encourage the development of a stronger corporate bond market in SA

- Corporates being under-leveraged
- Banks being under pressure to price corporate loans correctly
- Costs of bond finance reducing with domestic interest rates
- SA institutions being underweight in bonds
- Decreasing supply of new domestic government debt\
- Firmer stance of tax authorities thus reduction in use of structuredfinance to reduce tax payments

Discuss the different types of corporate bonds

11.8.1 (a) Bonds classified by yield VZ p314

Vanilla Bonds: Fixed interest rate, fixed maturity dates. Buyer and issuer are certain of the money flows attached to the bond.

Variable interest rate bonds/FRNs (floating rate notes): are linked to a predetermined benchmark interest rate.

Zero-coupon bonds: Bonds without regular coupon payments. Buyer is certain of the return.

(b) Bonds classified by security VZ p315

Mortgage bond: Most secure in that it represents a claim against specific assets owned by the issuing party.

Debenture: long-term unsecured debt instruments of the private sector.

Income bonds: Holders have a right to the earnings of a company before shareholders and subordinated debenture holders.

Guaranteed bonds: are guaranteed by another entity. E.g. Bonds issued by Transnet are guaranteed by the SA government.

(c) Bonds classified by terms VZ p315

Callable bonds: The principal is redeemable at the discretion of the issuer. The issuer might have accumulated surplus funds and wants to redeem its debt now, thus saving on the interest payments.

Redeemable bonds: can be redeemed by the issuer before maturity or at certain intervals or dates stipulated in the bond contract.

Sinking fund bonds: Bonds with more than one maturity date. The principal is repaid in terms of a set schedule.

Convertible bonds: Grant the bondholder the option or right to convert the bond to a specific predetermined number of shares of the issuer at certain terms. Barlows, Sappi and Liberty have done this.

Exchangeable bonds: Grant the bondholder the option or right to convert the bond to a specific predetermined number of shares of **another** company, normally related in some way to the issuing company.

Bonds issued with warrants: grants the holder the option to buy a predetermined number of shares of a certain company at a specified price. The warrant may be sold independently from the bond.

Putable bonds: Give the holder the right to sell the bonds back to the issuer at par on certain predetermined dats. The investor may choose to do so when interest rates rise and there are other investment opportunities offering higher return.

Define and discuss securitization

11.8.1 Bonds new to the SA market VZ p317

Securitization is a process through which untradeable assets e.g. shop loans or the cash flows from any assets become tradeable.

Securitization involves the collection of loans and selling securities backed by those loans. Conventional practice is as follows:

- A loan granted by an intermediary to a client stays in that intermediary's asset portfolio until payback, thus the intermediary carries the credit risk
- The intermediary is responsible for finding liabilities to fund the loan
- The intermediary is responsible for servicing the loan, which includes dealing with the client and collecting payment

Define a medium-term note programme

11.8.1 VZ p318

A debt instrument offered to investors on a continuous basis, without having to list each bond separately. The listing procedure happens once; the information contained in the listing statement is updated regularly. This system provides flexible access to the bond market and decreases the delays inherent in the listing procedure. Issuers can taken advantage of low interest rates by selling previously listed securities at a moment's notice.

Define and briefly discuss catastrophe-linked bonds CAT bonds

11.8.1 CAT bonds VZ p318

May be issued to increase the capacity of the insurance industry by allowing investors from outside the insurance industry to underwrite some of the risks faced by insurers and reinsurers. The catastrophe is specified and may be any natural catastrophe.
CAT bonds substitute disaster risk for credit risk.
A Special Purpose Institution SPI is formed, a company whose sole purpose is to raise funds in the capital market and enter into an insurance or reinsurance contract with the sponsor. The SPI sells the CAT bonds. Fund raised from the sale of CAT bonds are kept in a purposely established collateral account, which funds earn only the risk-free rate of return. Bondholders will demand a higher return because of the risk attached to the bond. The different between the actual and the required rate of return is made up by payments from the sponsor to the SPI.
If the catastrophe does not occur and the funds are not used during the currency of the bond, the funds in the collateral account are used to repay the bondholders at maturity. If the disaster **does** occur, funds from the collateral account are distributed to the issuer. There is no credit risk attached to CAT bonds, only the risk that a specified catastrophe may occur.

Discuss the primary and secondary markets for corporate bonds

11.8.2 Primary and secondary markets for corporate bonds VZ p319

Bonds can be traded in formal markets like BESA or OTC wehre unlisted bonds are traded. The **third market** is the name for listed bonds being traded **off** the organized exchange. Where buyers and sellers trade directly with each other, not through a broker, it is known as the **fourth market**. Most corporate bonds in SA are unlisted.
Bonds can be issued by **public offering** or by **private placement,** whereby the bonds are sold to a limited number of predetermined investors.

Companies wanting to issue bonds may approach the merchant or corporate section of a bank, which provides the following services:

- Advises the client on price, terms, timing of the issue
- Acts as broker and distributes the bonds to the public
- Acts as dealer by buying the bonds from the issuer and selling them in the market

5.2.2 The Share Market

12.1 The Share Market VZ p 329

Make sure that you can

Define shares and distinguish between shares and bonds

Shares are marketable financial instruments of listed companies quoted and traded on the JSE, which represent ownership by investors of the productive assets of listed companies.

A shareholding represents co-ownership in a company, whereas bondholders are creditors.

12.2 Different classes of share

Make sure you can

Define all the different types of shares

Ordinary shares represent co-ownership of a company by the ordinary shareholders and these shareholders have a right to vote on matters of corporate governance in proportion to the number of shares held. Ordinary shareholders participate in both risk and return and can use voting rights to influence company profits and dividend policy. The two main characteristics of ordinary shares are (a) the right to residual claim of income and assets after all prior claims and (b) limited liability.

Nonvoting ordinary shares prevent the dilution of ordinary shareholder control.

Deferred shares are issued to raise capital for a project that would not produce a profit at the outset. Some condition is attached to the payment of dividends.

Bearer shares are issued in the absence of a share register, ownership is dependant on physical possession of the share certificate entitling the holder to claim dividends.

Nil-paid letters are tradeable rights in the form of temporary listed securities, giving the holder the right to take up shares in a specific company at a specific price on a specific date, and are created to give existing shareholders the opportunity to take advantage of rights issues.

Preference shares are equity instruments with the characteristics of fixed-income securities and usually carrying no voting rights. Preference shares are held by preferred shareholders who rank higher than ordinary shareholders with regard to the distribution of dividends and of capital repayment in the event of liquidation.

Noncumulative preference shares: Holders forego dividends if payments are missed.

Cumulative preference shares: Unpaid dividends accrue over time and must be paid in full before ordinary shareholders can receive dividend payments.

Participating preference shares: Receive a specified dividend at a fixed nominal predetermined rate and the right to receive additional dividends by participating in additional earnings under specified conditions such as according to a predetermined formula once dividends paid to ordinary shareholders reach a specified level.

Convertible preference shares: Carry a fixed predetermined annual dividend rate and a right of conversion to ordinary shares according to specified terms and conditions.

Redeemable preference shares: The issuing company has the option to redeem the shares at a predetermined price, date.

12.3 The primary and secondary share markets VZ p333

Study 12.3 and make sure you can

Describe how new issues and secondary trading of shares affect the size of the pool of shares available to trade in

Newly issued shares are traded in **the primary market**, where borrowers raise capital

Subsequent trading takes place **in the secondary market**, where investors trade shares at current market prices

Issuing activity in the primary market determines the **size of the pool of shares** available for trade in the secondary market

Transactions in the secondary market determine **the tradability** (the ease with which shares can be traded), **the marketability** (buying and selling shares without impacting on the price) and **liquidity** (the ability to convert shares into cash or to purchase shares at short notice) of the pool of shares and assist in the price formation process.

List and define the four markets that the secondary market can be disaggregated into

The **secondary market** can be disaggregated into four markets:

1. **The formal market** where listed shares on the JSE are traded
2. **The OTC market**, an unlicensed informal market for the trading of shares
3. **off exchange** trades in listed shares
4. **direct trades** between buyers and sellers without the intermediation of brokers

Describe how changes in demand and supply for shares can affect share prices

Companies' issuing of shares in the primary market reflects their demand for finance relative to the supply of funds by investors wanting investment opportunities. The trade-off between demand and supply influences the determination of share prices.

Issuers of share capital are in competition with borrowers and investors in other asset markets. Changes in investor preferences for certain assets classes also affect the availability of funding in the primary share market. Switching between asset classes by investors reflects their ever-changing assessment of expected risks and returns as market conditions change.

List the advantages and disadvantages of listing on a stock exchange

Advantages:

Improved access to funding

Tradability which lures investors

Enhanced profiles of listed companies

Disadvantages:

Cost associated with the initial listing and its maintenance

Cost and management cost of compliance with the JSE listing requirements in addition to the Companies Act

Listed companies are penalized by the JSE for non compliance with listing requirements

Explain the role of the sponsor in the primary share market

Listed companies issuing new additional shares put out a **prospectus** in accordance with requirements of the Companies Act, bringing the offering to the attention of the public and key information on the company and its

directors. A **sponsor** who is a broking member of the JSE is nominated by the company to act as liaison between the company and the JSE, and this sponsor assists in compiling the prospectus in compliance with all requirements and lodges listing documentation and the prospectus with the JSE for approval. Once the JSE has approved the prospectus, copies are distributed to potential investors.

Explain the role of the stockbroker in the share market

Investors buying shares in the primary market must trade through a stockbroker which is a JSE member firm. In this case the stockbroker acts on behalf of the investor and the member firm has no personal interest in the order. However when the stockbroker acts as a principal to a trade, the member firm acts as the opposite party to the trade, trading for own account.

Stockbrokers of member firms will give investment advice to clients including the sector allocation, companies (stock picking), number of shares (exposure) and share price at which the instruction to trade must be executed. Once the details have been determined, the client instructs the stockbroker to effect the trades.

The stockbroker instructs the dealer to execute the transaction on behalf of the client. The dealer enters an order on the trading system for continuous matching of bids and offers (offers to buy and sell) by comparing orders and executing trades when the terms of the orders match, at which stage the matched deal becomes a confirmed deal. The stockbroker sends a broker's note to the client within 24 hours of the transaction recording the detail of the share transaction, including brokerage (commission), the basic charge (broker fee), marketable securities tax, other charges, and settlement date. Deals are confirmed through a clearing system followed by electronic settlement through STRATE.

Define the terms market capitalization and liquidity

Market capitalization of a listed company is a measure of the market value of the share capital of a company.

Market capitalization of an exchange is the sum of the market capitalization of the companies listed on it.

Liquidity = market turnover / market capitalization which indicates the relative ease with which an investor can buy or sell shares on an exchange.

Distinguish between different types of investors in the share market

Private individuals or **retail investors**

Institutional investors, organizations investing funds received as bank deposits, insurance premiums, pension fund contributions, unit trust purchases, collective investment scheme purchases

In both cases investors may be resident or nonresident

12.4 Types of share transaction on the JSE VZ P339

Study Section 12.4 and make sure you can

Describe and distinguish between the different types of transactions on the JSE

Spot transactions which are settled within five business days after transaction date in the STRATE environment

Arbitrage transactions, the simultaneous purchase or sale of a share in one market and the sale or purchase thereof in another market, at different prices. This type of transaction achieves riskless profit from the differences of prices of the share in the different markets.

Bear sales are the sale of shares not owned by the seller in anticipation of buying the shares at a price lower than the selling price, before delivery, with the object of locking in a profit. The seller believes that the price will drop and this action is also called **selling short.**

Bear sales are governed by JSE rules and must be declared. Minimum cover must be provided before the sale is executed. In order to deliver the scrip, the short seller must borrow it from a financial institution with a **long position** in the share, then buy the shares in the market at the prevailing price to honour and settle the script lending transaction.

Put-through transactions are concluded by a stockbroker (JSE member firm) on behalf of its own clients by simultaneously buying and selling the same shares at the same price to both parties.

Special bargain transactions are beyond the capacity of the market at the prevailing price and are acceptable when the volume of trading associated with the transaction is beyond the capacity of the market. The transaction between buying and selling stockbrokers is concluded at a price above or below the prevailing market price.

Odd-lot transactions are transactions in shares in multiples other than round hundreds.

In terms of execution:

All-or-nothing trades – the full order must be executed immediately but if impossible the order must be routed to a special term's order book.

At-market trades – instructions to execute the trade immediately against the best opposite order at the time

Fill-or-kill trades – requires immediate complete execution of the full order, otherwise the order is cancelled.

In terms of price:

At best trades, market order trades – both are trades to buy or sell at the best price. The stockbroker has the discretion to conclude the deal on the client's behalf at the most advantageous price, without delay.

Limited order trades – the order is executed only at a price equal to or better than the price specified on the order.

In terms of size:

Block trades – a trade where a large number of shares is bought and sold as a single unit.

In terms of settlement:

Time bargain trades – requires the transaction to be concluded within a specified time frame and rights to dividends accrue to the buyer

Buyer's option time bargain – a transaction for forward settlement giving the buyer the option to demand settlement before the agreed settlement date

Seller's option time bargain – a transaction for forward settlement, giving the seller the option to delivery the shares at any time between 3 and 13 weeks after the execution of the trade

Forward transactions – Transactions for settlement at a specified future settlement date or period

Immediate deal – requires delivery versus payment before the end of the current settlement period.

Other trading strategies

Stop loss trading – to cut losses and allow profits to accumulate, effected by buying a share and setting a floor price at a level below the purchase price. If the share price declines to a level equal to or lower than the floor price, the share will be sold. The floor price increases with the share price. If at some point the share price declines to the level of the floor price, this leads to a sale. This determines a ceiling above the sale price, which moves downwards as the market price declines. At some point the share price increases again and, when it breaches the ceiling, the share is bought and a new floor price is determined.

Hedging reduces risk by taking an offsetting position to an existing position in anticipation of a change in market prices.

Rand cost averaging entails the purchase of more of the same shares as the price falls, lowering the average price of the total holdings.

Be able to define the following from 12.5

- ***a bid price***
  The price the buyer is prepared to pay to acquire the share
- ***an offer price***
  The price at which the seller is prepared to sell the share
- ***bid/offer spread***
  The difference between the bid (buyer) price and the offer (seller) price
- ***annual dividend declared on a share***
  The sum of total dividends in a share for a specific financial year
- ***capital appreciation or depreciation on shares***
  The change in value of the shareholding in consequence of an increase (appreciation) or decrease (depreciation) in the price of a share
- ***ex-dividend***
  Market price excluding participation in current dividends; an investor who buys a share after the ex dividend date is not entitled to the declared dividend when paid and the seller receives the dividend
- ***cum-dividend***
  Market price including participation in current dividends; an investor who acquires a share before the ex dividend date is entitled to the declared dividend; the price of the share includes the value of the dividend, the buyer pays for the dividend receivable and the seller is compensated for its loss

5.3 THE FOREIGN EXCHANGE MARKET

5.3.1 Definitions and concepts

13.1 Fixed versus floating exchange rates VZ p356

Study 13.1 and make sure that you can

Explain the difference between a fixed and a floating exchange rate, and what the Euro is

Fixed exchange rate – an exchange rate which is pegged to another currency (e.g. US$) in an attempt to avoid currency volatility. Market forces have no effect on the fixed rate.

Floating exchange rate – an exchange rate which is allowed to move freely against other currencies, market forces determining the rate on an

ongoing basis. South Africa operates on a floating exchange rate system where no government intervention is applied to prevent the currency from losing its value. In recent weeks the increase of the domestic interest rate has attracted foreign investment into South Africa, and as a result the Rand has strengthened. However, the purpose of increasing the interest rate was not to impact on the Rand, but to control inflation and stimulate economic growth.

The Euro currency is an accounting currency for a number of European countries belonging to the European Union, replacing legacy currencies for each individual country. Great Britain, however, still retains its legacy currency, the Pound Sterling.

13.1.2 South African Exchange controls VZ p357

Briefly discuss exchange controls in South Africa

Exchange control was imposed in the early 1930s and controls have been relaxed or tightened sporadically ever since, mostly to avoid capital flight resulting from political tensions in apartheid South Africa. Exchange control is still in place today, albeit in relaxed form.

- The SARB controls enforcement of exchange control regulations and the appointment of authorized dealers in foreign exchange. These dealers are the only entities permitted to trade in foreign exchange instruments and gold.
- Foreign exchange speculation is not permitted.
- Foreign currency proceeds from the export of South African goods must be converted into Rand no later than 6 months after shipment.

13.2 Size of market VZ p358

Know that turnover in foreign exchange markets exceeds turnover in all other markets

Turnover in the wholesale SA foreign exchange market far exceeds that of the domestic equity and bond markets combined. The significance of the foreign exchange market is that it is the market through which the domestic economy is connected to the rest of the world through the balance of payments. It is also the market where the domestic exchange rates are determined which affects decision makers throughout the economy.

13.3 Nature of the market VZ p359

Define and briefly describe the foreign exchange market

The foreign exchange market is a financial asset (stock) market where foreign currencies are traded.

In addition, foreign currency flows arising from international trade are reconciled in this market.

The foreign exchange market also connects the money and capital markets in different countries.

The average volume of foreign currency transactions in the foreign exchange market are generally much greater than those arising purely from international trade in goods and services.

Define and exchange rate and briefly describe the factors affecting it

An exchange rate is the relative price of one currency in terms of another. As such it is a financial asset price comparable to other financial assets such as shares. Prices react quickly to new information which changes expected returns on the asset. Exchange rates are typically volatile because the release of new information to the market is unpredictable and speculation can exert considerable influence on the equilibrium exchange rate.

5.3.2 Participants in the foreign exchange market VZ p361

13.5 It is important to distinguish between transactions from the customer's side and those in the interbank market

13.5.1 ***Describe the customers or end-users in the foreign exchange market***

From the customer's side of the market, every international transaction gives rise to a derived demand and supply of currencies.

A TV set imported from Japan into SA gives rise to a demand for Yen and a supply of Rands.

A government bond bought by a German resident gives rise to a demand for Rands and a supply of Euros.

The required exchanges of one currency for another are reconciled in the foreign exchange market.

Foreign exchange market is not a physical location

The existence of a foreign exchange market requires that currency trades communicate with each other which they can do telephonically or electronically, which such traders can do from their individual locations.

13.5.2 Foreign exchange dealers and brokers VZ p362

Distinguish between foreign exchange dealers and brokers and explain their roles in the foreign exchange market

Dealers or **traders** work for banks which are authorized foreign currency dealers; they are market makers being prepared to both buy and sell foreign currencies. Dealers earn from the spread, the difference between the buying and selling price of a currency. They buy currency for themselves in a sale to an end user, and sell their own currency holdings in a purchase by one.

Brokers are intermediaries who match banks wishing to buy foreign currencies with those who want to sell them, continuously quoting buying and selling prices. Brokers charge a commission or **brokerage** on transactions and act merely as agents, not buying the currency themselves.

Distinguish between a short and a long position in foreign exchange

Dealers are exposed to risk if the amount of a currency they buy does not match what has been sold. If a dealer has purchased US$20m more than the amount sold, he is **long** on dollars and is exposed to the risk of loss if the US$ value falls against the Rand. If he has sold US$20m less than the amount purchased, he is **short** on dollars and is exposed to the risk loss if the US$ value rises against the Rand.

Explain the limits on a bank's open position in foreign currency

At present the daily net open position in foreign currency (whether long or short) of a South African bank may not be more than 10% of its capital and reserves. This is a limit exposed by the SARB and the banks impose clear internal limits in turn.

5.3.3 Exchange rate quotations and cross rates

13.6 Exchange rate conventions and methods of quotation

13.6.1 The spot foreign exchange market VZ p363

Make sure that you can

Describe the spot foreign exchange market

The spot foreign exchange market is where currencies are traded for immediate settlement, which normally means two business days after concluding the deal.

13.6.2 ISO and SWIFT VZ p363

Explain what an ISO code is (no need to know the different codes)

Every currency has a unique three-letter code used by foreign exchange dealers worldwide, the ISO code. South Africa, e.g., is ZAR.

13.6.3 Direct and indirect quotations VZ p364

Distinguish between a direct and indirect quotation of a currency; explain appreciation and depreciation of a currency

Direct quotation is the domestic price of one unit of a foreign currency, e.g. USD/ZAR 6,00 or six rand to the dollar. A **lower** exchange rate in this method implies that the domestic currency has **appreciated**, a **higher** exchange rate that it has **depreciated** against the foreign currency

Indirect quotation is the reverse, e.g. ZAR/USD 0,1667, or 16.67 US cents to the rand. A **lower** exchange rate in this method implies that the domestic currency has **depreciated,** a **higher** rate that the domestic currency has **appreciated** against the foreign currency.

13.6.4 Base and counter currency VZ p365

Distinguish between a base and a counter currency and explain what these terms mean

ZAR/USD 6,0000

These terms refer to the exchange rates quoted above; the **base currency** is the first (ZAR) and the **counter currency** is the second (USD).

Seeing that currencies can be quoted directly or indirectly, either in the example above can be the base or the counter currency.

13.6.5 Bids and offers VZ p365

Distinguish between a bid price and an offer price by a foreign exchange dealer and apply such a bid/offer price to a certain transaction as shown in the example

USD/ZAR 6,2500/6,2700

The **bid price** is shown first and is the price at which the dealer is prepared to **buy** the base currency, the **offer price,** shown second, that at which he is prepared to **sell**.

13.6.6 Converting base and variable currency amounts VZ p366

Convert a base currency amount to an equivalent variable currency amount and convert a variable currency amount to an equivalent* base *currency amount as shown in the examples

When converting from a base currency to the equivalent variable currency amount, multiply by the exchange rate. If the quoted rate is thus:
USD/CHF 1,1920/1,1985
Write it down as below to work it out:
USD/CHF
1,1920/1,1985

Buys USD/Sells USD	The base currency goes on top line
Sells CHF/Buys CHF	Variable currency on lower line

13.6.7 The bid-offer spread VZ p367

Define the bid-offer spread and list factors that affect it

The bid-offer spread is the difference between the dealer's buying and selling prices and is, in fact, the profit margin made by the banks.
The spread is affected by:

- the norm in a particular market
- prevailing liquidity in the relevant pair of currencies
- market volatility
- the amount in question
- the client (or counterparty)

Generally speaking, wider spreads (thus higher profits) reflect a less developed market, relative illiquidity, high volatility, larger amounts, less price-sensitive clients.

13.7 Cross rates VZ p367

Define a cross rate and know what triangulation means

A **cross rate** is an exchange rate between any two currencies **excluding** the US$.
Triangulation is a pricing principle for arriving at an exchange rate for two currencies where the rate is not readily available from a dealer. For example, if rates between EUR/USD and GBP/USD are known and a rate for EUR/GBP is **not** known, the EUR/GBP rate can be arrived at from the other two rates.

5.3.4 Derivatives involving foreign exchange

13.8 The forward foreign exchange market VZ p369

Make sure that you can

Define the forward foreign exchange market

The forward foreign exchange market is where the amount of foreign currency and exchange rate are decided now, but the delivery of the currency is for a given rate in the future; thus this market is a derivative of the spot foreign exchange market. The forward rate is generally not the same as the ruling spot exchange rate; it may be higher or lower

depending on the difference in the money market interest rates of the currencies concerned.

13.8.1 Hedging VZ p370

Briefly describe hedging by means of the forward foreign exchange market

Generally, hedging is a precautionary measure to avoid risk. The forward foreign exchange market allows importers and exporters to hedge the risk of exchange rate changes which may affect their domestic currency payments and receipts.

13.8.2 Speculation VZ p370

Briefly describe what speculation in the forward foreign exchange market entails

Foreign exchange speculation is permitted in SA in the spot and forward markets to authorized dealers. If the Pound were expected to appreciate strongly against the dollar over the next 6 months, a speculator would buy pounds forward against the dollar in order to make a profit from the expectation.

In the forward market, no money usually has to be paid up front for a forward contract, thus achieving a highly leveraged position. The longer term of a forward contract gives a longer horizon for the currency to make a favourable movement, and also prevents the speculator being squeezed by monetary authorities, who often respond to speculative attacks by increasing interest rates, making it more expensive to take a short position in the currency by borrowing it in order to immediately sell it.

5.4 DERIVATIVES

Study 14.1 and 14.2,

14.1 Definition VZ p378

14.1.1 Significance of definition VZ p379

Define a derivative

A derivative is a contract whose value derives from the value of an underlying asset, reference rate or index.

A derivative is an instrument which embodies different **terms, rights or obligations** to those prevailing in the underlying, cash or physical market to which the instrument relates.

The five most important instruments are future, forwards, swaps, options and warrants.

14.1.2 Spotting the derivative VZ p381

Explain derivatives by referring to the ways in which they differ from the normal underlying, cash or physical markets

Timing: Derivatives almost always have different settlement compared to normal cash market transactions in the particular underlying instrument or commodity. Contractually changing the settlement from what is normal (T+2 in the spot foreign exchange market) to e.g. T+3 represents a derivative transaction, since the timing has changed (different **terms)**.

Rights and obligations: Consider an **option** where there is uncertainty as to whether the underlying transaction will take place at all, since the holder of the option has the right to elect whether the option is exercised.

14.1.3 Scope of derivatives markets VZ p383

Answer short questions on the scope of derivatives markets

Derivatives exist on almost all traded financial and commodity markets and even on instruments which are not publicly traded.
The development of derivatives markets has generally been in response to the liberalisation of the underlying financial markets to which they relate.
The derivatives markets can be seen as supplementary markets existing side by side with the underlying markets to which they relate.
Derivatives bring much greater dimension and flexibility to these markets as well as a host of new participants with different risk appetites and motivations.

Global derivatives markets have experienced explosive growth over the last couple of decades for various reasons, including

- Globalisation and liberalization of world trade
- Relaxation of capital controls permitting a huge increase in global investment opportunities and risks
- Technology and communications revolution
- Development of risk management as an organizational strategic focus
- Success of the derivatives industry over this period in applying theoretical models to practical solutions

14.2 Classification of derivatives

14.2.1 Exchange traded and OTC VZ p385

Distinguish between exchange traded and OTC traded derivatives

A large number of derivatives are transacted on organized exchanges.
In general, exchange-traded derivatives are less complex and more liquid than those found in the OTC markets, which comprise mainly banks and other market makers who quote customized derivatives directly to one another and their clients. The OTC market is the larger of the two and is also seen as the market providing greater flexibility and innovation. OTC market makers quote a far wider range of products to clients than the exchanges and are able to quote unique or nonstandard requirements e.g. **broken dates**, i.e. dates which do not accord with a formal exchange delivery date.
The local OTC foreign exchange market is closely supervised and regulated by the SARB.

14.2.2 Cash settled and physically settled p387

Explain the difference between the two

Physical settlement takes place where there is a physical exchange of the underlying instrument at expiry of the derivative. The parties to the transaction may agree to settle solely the economic value, and this is known as **net cash settlement**

14.2.3 Vanilla and exotic derivatives VZ p388

Distinguish between vanilla and exotic derivatives

Vanilla derivatives are standard and straightforward, as opposed to **exotic derivatives**, which are generally neither of the two. However, the definition is fuzzy due to subjective interpretations and by the blurring of the edges between the two. Exotic derivatives are sometimes simply combinations of vanilla derivatives, and vanilla derivatives sometimes relate to complex mathematics.

14.3 Futures and forwards VZ p390

Futures are exchange-listed futures contracts to buy or sell a certain quantity of a certain underlying instrument or commodity at a precise price, place and time in the future. The equivalent in the OTC markets are **forwards** (and **forward rate agreements** in the case of forward contracts on interest rates).

14.3.1 Futures versus forwards VZ p390

Define a future

A "future" or future contract is a contract to buy or sell a certain quantity of a certain underlying instrument or commodity at a precise price, place and time in the future.

Explain the difference between a future and a forward

The two instruments are almost identical. Future contracts are traded in the JSE and forward contracts OTC. Future contracts are the preferred instrument of the professional dealer, while forward contracts are preferred by corporations and other entities who are neither financial intermediaries nor professional traders, mostly because of their additional flexibility and their capacity to be timed and sized to match specific exposures.

Very few futures contracts result in physical delivery, generally being settled by net cash settlement.

14.3.2 Financial and nonfinancial future VZ p391

Differentiate between financial and nonfinancial futures

This classification refers to the underlying instrument of the contract. Financial futures relate to underlying financial instruments or markets whereas nonfinancial futures relate to commodities such as maize and wheat futures "soft commodities" or metals and oil "hard commodities".

14.3.5 Forward rate agreements VZ P397

Define and explain a forward rate agreement

An **FRA** enables either a borrower or a lender of money to lock in an interest rate for a specific period. They are the OTC equivalent of interest rate futures with all the attendant flexibility that goes with their OTC provenance. FRAs are normally short dated, typically three months out to two years. An FRA is an agreement to purchase or sell a floating rate of interest on a notional sum and for a defined future period at a price agreed today. In SA The floating rate is currently JIBAR.

14.4 Swaps VZ P398

Define a swap

A **swap** is an agreement to exchange cash flows at a predetermined rate or reference rate for a defined period between two parties, often using a net cash settlement of the respective cash flows. The two most important swap markets in terms of volumes traded are the interest rate swap and foreign exchange swap markets.

14.4.1 Interest rate swaps VZ p398

Define and explain an interest rate swap

A **vanilla interest rate swap** is an agreement between two parties to settle the net difference between two interest rate payments on a notional amount of money, one party agreeing to pay a fixed, the other a floating, rate of interest.

Company X has a loan with Bank A for loan finance, for three years with a floating interest rate to be recalculated quarterly as the prevailing Bank A interest rate + credit margin of 150 basis points, 1.5%. The underlying interest rate fluctuates and Company X wants to reduce uncertainty of its funding by fixing the interest rates on its loan. It transacts a payer's swap with the Bank whereby it pays a fixed but receives a floating interest rate.

14.5.1 Options and warrants VZ p403

Define an option

An option is a contract giving the **option** or **right**, but not the **obligation**, either to buy or sell a specific quantity of an asset at an agreed price at some time in the future. The holder of the option may of course choose **not** to exercise his option.

14.5.2 Option terminology VZ p403

Define the different terms relating to options

Puts and calls

A **put** option gives the buyer the right to sell and a call option the right to buy, the underlying instrument.

Premium

The option **premium** is the amount the buyer must pay to the seller for the right to choose whether to exercise. It is normally paid within a short time after the date on which the option is purchased.

Buyers and sellers

The buyer pays the premium to the seller, who is obliged to transact the underlying cash flows of the option if the option buyer so chooses which he (the seller) will do only if it is to his advantage. The seller is at a disadvantage and it is this inequality which defines the essence and economics of an option.

Exercise or strike price

This is the settlement price. The difference between the prevailing price and the strike price influences the **premium** paid for the option.

In the money – where the strike price is more favourable to the holder than the prevailing market price

Out of the money – where the strike price is less favourable to the holder than the prevailing market price

At the money – where strike and market prices are equal

American / European style options
American – can be exercised at any time
European – may be exercised only at the end of their life

Volatility

Time value, intrinsic value
Intrinsic value is the amount by which an option is **in the money**
The greater the **intrinsic value**, the higher the **premium**
Time value is that portion of the option which is not **intrinsic value**
It relates to the value the holder has in having a choice to exercise, and the uncertainty thereof

Briefly discuss the different uses of derivatives

14.6 Using derivatives

14.6.1 Hedging VZ p413

Hedging involves transacting a derivative with characteristics which ensure that any change in value of the underlying exposure confronting the hedging entity is offset by a change in value of the derivative.
The hedger achieves greater predictability and less risk for future cashflows.

14.6.2 Speculation VZ p414

Derivatives permit speculators to avoid the problems attaching to dealing in the physical or cash markets especially when the underlying item is a physical commodity or when it is administratively cumbersome like a stock index.

14.6.3 Alternative instruments VZ p416

Hedge funds employ derivatives as the underlying investment asset of the fund.

14.6.4 Synthetic financial instruments VZ P416

Derivatives have become important for synthesizing transactions in order to take advantage of a more favourable accounting, regulatory or legal treatment. The off-balance sheet nature of many derivatives transactions has encouraged their use from an accounting perspective and one finds straightforward cash market transactions being replicated by derivatives to take advantage of this different usually more favourable treatment.

14.6.5 Reducing costs VZ p417