PAPER 1 INVESTMENT ADVICE AND PORTFOLIO MANAGEMENT December 2018

Time Designated: 2 hours	**Examiners:**
Time allowed: 2 hours and 30 minutes	**R North**
	WH Bowler (Moderator)

Total Marks: 120

PLEASE READ THE FOLLOWING INSTRUCTIONS CAREFULLY

1. **This examination was designed to be completed within the allotted 2 hours. Candidates often do not demonstrate their full knowledge by panicking when faced with time constraints. Consequently on the advice of the external examiner: - 30 minutes READING TIME will be allowed before the start to read the paper. You may make notes on a designated piece of paper on the structure or flow of Question One during this 30 minutes.** ***You will be required to hand in the notes sheet on completion of the exam.***

2. **Read each question carefully. There is no need to elaborate outside the scope of the question asked. Lengthy answers are not necessary - answers in note form, provided they are explicit, are preferred.**

3. **Answer all Questions.**

4. **There are three (3) sections to the examination.**

	MARKS
Section A	**70**
Section B	**30**
Section C	**20**
	120

5. **You may answer the questions in any order as long as they are CLEARLY NUMBERED.**

6. **This is NOT an open book examination.**

7. **A Profile's Stock Exchange Handbook, a recent business newspaper (English and Afrikaans) and SARS income tax tables for individuals will be provided for each candidate to be used in the examination.**

8. **A calculator may be brought by each candidate to be used in the examination.**

9. **In order to PASS candidates require a minimum of 50% (35 Marks) for Section A, PLUS an overall 50% (60 Marks) for the entire examination paper.**

10. **An average of 65% for the two papers is required to pass the exam.**

SECTION A

Total marks for this section: 70.

Question 1

You have recently been hired at a Wealth Management and Stockbroking firm. Your boss is exceptionally busy and he has a number of bespoke client proposals to deliver to clients. He has asked for your assistance in finalising a client proposal.

Your firm has a specific process that it follows for all client proposals and it is important for regulatory and compliance to be happy with the proposal. It is also vital in terms of your mandate that you ensure coverage of all the client's needs and requirements.

You are lucky that your boss has already completed a number of the initial sections of the proposal.
He has completed the introduction, needs analysis and the regulatory issues
He asks that you complete the actual client investment proposal (Solution) and the solution needs to have a real return after all costs and taxes.

- Introduction
    - An existing client of the firm, Mr Bond, has visited the firm for his annual review. He has had recent changes in his risk profile, his investment objectives and his investment requirements. He has reached milestones in his life and it is time to ensure his investments are rebalanced to meet his new situation.
    - Mr Bond has taken a far sterner and more serious approach to his investments and is adamant in ensuring that his investments have a strong probability of reaching his required real returns. He is not interested in flowery hypothetical scenarios he would like a clearly defined approach and strategy to reach a proposed return.
    - Although Mr Bond feels his investment time horizon is getting significantly shorter as he gets older he also acknowledges that he needs to take on some risk to ensure his retirement is as comfortable as he would like it to be.
    - He is not entirely happy about the state of the economy locally or offshore for the next few years and he is deeply concerned about some sectors in the market, namely technology, retail and resources. He acknowledges resources have significantly underperformed the market but he is still concerned about their future performance. As an example technology and online retail shares have significantly out-performed the market and he is concerned about a pull back.
- Needs Analysis
    - Mr Bond has recently celebrated his 55th birthday and been promoted to executive director at the listed company he works at. Of his three children, two have left university and are starting their working careers and one is starting University in the New Year. Mr Bond's wife is a counselor at a local school.
    - Mr Bond would like to retire at 65.
    - He would like to achieve an annualized 11% after tax return for the next 10 years. (*is this realistic in light of the change in the client's risk profile?)*
    - His current portfolio is worth R5 million.
    - He does not like a cumbersome portfolio and would prefer to have a relatively concentrated share/bond allocation with diversity on sector allocation. No more than 10 - 12 holdings.
    - He believes inflation will increase significantly in South Africa.

- Short term cash liquidity is not a major issue in his mind based on his recent promotion, however he will potentially need a lump sum to pay off his mortgage when he retires. He is also slightly concerned that he will have to fund his children's "start" in life.

- Regulatory Requirements (These are generic potential regulatory issues)
    - Capabilities in terms of managing assets
        - Licensed to trade in Equities / Bonds and Derivatives
    - Fiduciary Duties
        - TCF, Chinese Walls and segregation of Duties
    - FICA / FAIS
        - Ability to manage assets on behalf of clients and have the clients detail's changed recently, is there a requirement for new proof of residence etc
    - Disclosures
        - Past returns do not have a bearing on future returns
    - Pension Requirements
        - Not necessary in this example but need to know Reg 28 – Pension Funds Act
    - Existing Mandate and what it covers
        - Make decisions on behalf of client. Do not step outside legally binding mandate conditions and client requests
    - Juristic Requirements or Regulation
        - Exchange Controls, Tax clearances, Foreign investment allowance, Asset swap if necessary
    - Communication
        - How and when will you communicate?
    - Duties and responsibilities of all parties
        - What will be your function (manage assets, inform client of any circumstances that have changed and meet with the client for a minimum of one annual review)
        - Client is required to notify of any changes to his / her situation
    - Operational Process
        - Flow of funds, tax reporting and risks
    - Custody of Assets
        - Assets held in nominee
        - Cash held in JSET

Solution (70 Marks)

Including:

- Your investment strategy – (Talk about all aspects of your notes)
    - Top Down / Bottom Up
    - Active / Passive
    - Absolute Return Objective
    - Risk / Return
    - Capital / Income
    - Dividend / Corporate action Strategy
    - Time horizons
    - Goals
    - Performance Measures
    - Any specific considerations / constraints / views
    - Previous track record

- Your investment process
  - Fundamental Strategy
    - Ratios / DDM / Technical analysis etc
    - Timing of execution
- Asset Allocation
  - Strategic Asset Allocation and assumptions on the performance of the sectors.
    - Market will do x
    - Property will do y
    - Offshore will do z
    - ZAR ?
  - Developed vs Emerging Markets
  - Rebalancing Policy
  - Actual Asset Allocation
    - The candidate needs to show that the asset allocation fits within the clients risk and needs. Depending on the clients life cycle the candidate needs to highlight why the asset allocation has been proposed and the reason the asset allocation meets criteria. With specific reference to income or growth.
    - As an example the client mentioned has 10 years to retirement and is entering the consolidating stage of his life. He should not be taking on aggressive risk and should be entering a larger portion of his investment into a more defensive play. He however is looking for 11% average yield that cannot be currently achieved via a very defensive or a predominantly fixed income portfolio.
    - There is risk offset based on his recent promotion and this needs to be talked about. You need to explain how you propose he takes on more risk to increase his return. You can mention the efficient market hypothesis.
    - You need to talk to your theory i.e. he mentions that he is not all that excited about resources but they have come off considerably. What is your take? Remember it is a proposal! He mentions he believes IT and ecommerce are overvalued. Do you agree or disagree? Do not put him in Naspers on an earnings multiple of 98 and expect him to be happy.
    - Split your asset allocation into any asset class you believe suit the clients criteria as an example it could be split into any of the below :
      - Local Equity
      - Local Property
      - Local Bonds
      - Cash
      - Global Equities / Bonds
      - Commodities
- Underlying Investments
  - Why the choice of the actual constituents of the asset allocation
  - Defensive
  - Moat Companies
  - Specific to needs analysis (Sharia compliant or requested holdings)
  - Directorship / conflicts of interest

i.e.

The company currently likes the following

- Investment Weightings and yields
  - Below is an indication of a potential process that you could follow. The shares are randomly inputted and are not referenced to the client's needs. It is important that your answer has thought put into the selection. This thought process need to be documented next to a share.

i.e Standard Bank, recent pull back after the firing of the SA finance minister has given a good buying opportunity. Good consistent dividend. Growth strategy into Africa should produce rewards over the 10 years. Has exited the loss making UK business.

Total Investment Amount ZAR 5000000

Asset	Underlying Investment	Allocation	Value	Yield P/a	Return	Tax	After Tax Return?
Cash							
	JSE Trustees	2.50%	125000	6.20%	7750	Income (41%)	4572.5
	Money Market	1.50%	75000	6.50%	4875	Income (41%)	2876.25
Government Bonds	R186	12.50%	625000	8.00%	50000	Income (41%)	29500
Corporate Bonds	SHPCB	7.50%	375000	9.50%	35625	Income (41%)	21018.75
Equities							
	MTN	7%	350000	3.00%	10500	DWT (15%)	8925
	Billiton	6%	300000	4.00%	12000	DWT (15%)	10200
	Standard Bank	9%	450000	5.00%	22500	DWT (15%)	19125
	Famous Brands	6%	300000	3.00%	9000	DWT (15%)	7650
	etc	5%	250000	2.00%	5000	DWT (15%)	4250
	etc	5%	250000	3.00%	7500	DWT (15%)	6375
Property							
	Growthpoint	5%	250000	7.00%	17500	Income (41%)	10325
	etc	5%	250000	8.00%	20000	Income (41%)	11800
Offshore							
	MSCI World Index	18%	900000	2.00%	18000	DWT (15%)	15300
Commodities	Gold	10%	500000	0.00%	0		0
Total		100.00%	5000000		220,250.00		151,917.50

- Costs, Taxes, Returns
  - Taxes as per above
    - Portfolio strategy is long term and assets are generally held > 3 year. Investor status is given to the client so CGT applies on realized gains.
    - If the client is pre-retirement and employed he will just be taxed at his nominal tax rate however if he is post retirement or generates all income from investing there might be some adjustments required.
    - On Property REITs the tax has been averaged there is often a small portion of the disbursement that is Dividend in nature.
    - I have not included STT above however it would be important to note the fees. Especially on a portfolio that was being fully invested from Cash. Remember when STT applies and to which assets.
  - Brokerage @ .5%
    - You initial investment will be valued at .5% (5m x .5%) however on an ongoing basis the portfolio will rebalance / turn over only a % ie 20%
  - Portfolio Management Fee @ 1%
    - How do you value the PM fee (money weighted / time weighted) is it based on a high water mark or performance metric?
  - Custody Fee @.05%

- CONCLUSION

  Have you illustrated to the client that based on his requirements that he can achieve an annualised performance of 11%.

  In the above example you have only achieved a 3% Yield and after costs this will be reduced further by at least 1.505% in the first year.

  Based on your assumptions on yield and your re investment strategy of the dividends you would need your portfolio (actively manged) to perform by a minimum of 9 % a year.

  Think very hard about your asset allocation and stock selection. As you can see in the above example the portfolio does not pass muster.

  Do you also believe that your model portfolio is indicative of the risks that the client would like to assume? Does the proposal highlight any inefficiencies in the client's needs? Can you cater for the required cash / liquidity that the clients requires or do you have any other recommendations that you would like to propose?

  It is your job to explain to the client that he / she is being unreasonable in their expectations or that they need to adjust their strategy.

70 Marks

SECTION B

Total marks for this section: 30.

Question 1 (7 Marks)

A friend at university notes that you are studying Finance and Investment Management. He asks why (FSR) the First Rand Group was trading at a share price of 47.33 and (NED) Nedbank 206.50

He would like to know if this means that NED is much more valuable than FSR.

1) Describe Market Capitalisation of companies giving an example of the two companies above. Which company has a greater equity value?
    a. No. of shares in issue x share price. Share price on its own gives no indication of how much equity a company has.
    b. FSR higher equity
2) Describe a number of brief benefits of a listed company?
    a. Liquidity
    b. Regulatory / Audit controls
    c. Easily obtainable valuation
    d. Guaranteed settlement

Question 2 (8 Marks)

Warren Buffet described derivatives as weapons of mass destruction. However according to your lectures you note that if derivatives are used for hedging purposes you can actually reduce risk.

Describe 2 techniques for hedging:

One on a single listed company and one on a basket of shares. Please include a graphical representation of the hedge.
Covered calls, Put Option. Collar
Protective Put on index / Short Index via future / Forward

Question 3 (15 Marks)

At your first job interview you are asked how you evaluate stocks.

The person doing the interview would like you to simply reference three different valuation techniques. He would also like to know what type of companies or sectors the valuation technique would be suited to and why. Give an example of a listed company in that sector.

In focussing on any number of the techniques in your notes as an example:

Absolute Valuation Techniques:
Free Cash Flow to Firm / Free Cash flow to Equity - the cash flow available to all the firm's suppliers of capital (Shareholders for FCFE) once the firm pays all operating expenses (including taxes) and expenditures needed to sustain the firm's productive capacity.

Dividend Discount Model - calculates the "true" value of a firm based on the dividends the company pays its shareholders. Valuing the present value of cash flows.

In discussing a company or sector ask your self does the company pay regular dividends? What are the company's cash flows? Is it an established firm growing organically or via acquisition? Is the firm / sector in a hyper growth phase? What are the cash flows being utilised for?

Or

Relative Valuation Techniques:

Price to Book - used to compare a company's current market price to its book value.
Price to Sales - It is calculated by dividing the company's market cap by the revenue in the most recent year.

In discussing a company or sector discuss the ability to compare companies in that sector. How does the firm generate its income?

30 Marks

SECTION C

Total marks for this section: 20. (Please keep answers short and to the point, in many cases they are one word answers 1 Mark per question)

1) If an investor has bought a Bond with a 10 year duration but plans to sell it to buy a house in 5 years what risk is he / she partaking in?

a. Interest Rate Risk / Liquidity

2) Money loses its value over time for two reasons state one?

a. Inflation / opportunity costs

3) The net present value is the present value of all incremental cash flows, discounted to the present, less the?

a. Initial outlay

4) You are an investor in a listed company that raises an additional R2 billion in Equity. If you do not follow the rights what happens to your existing holdings?

a. Dilute your % of company owned

5) Companies finance their operations through issuing equity or?

a. Debt

6) Depository receipts are securities that trade like an ordinary share on a local exchange and represent an economic interest in what type of listed company?

a. Foreign Listed / Non Domestic

7) Cash received and cash spent by a firm is reported in a statement of?

a. Statement of cash flows

8) When evaluating the performance of a portfolio a portfolio manager or investor will compare the results against a?

a. Benchmark

9) When the needs and wants of a society exceed the resources available to satisfy them it is referred to as?

a. Scarcity

10) What is another name of Bonds?

a. Fixed Income / Fixed obligation / GILTS

11) When estimating intrinsic value, which of the following techniques do NOT form part of the Present Value of Cash Flows (PVCF) method?

a- Present value of dividends (DDM)
b- Present value of free cash flow to equity (FCFE)
c- Present value of cash flow to current liabilities (FCCL)
d- Present value of free operating cash flow to the firm (FCFF)

12) In addition to the investment objective that sets limits on risk and return, certain other constraints also affect the investment plan. Which of the following are constraints in the investment process?

1. Liquidity needs
2. Price collusion
3. Tax concerns
4. Legal and regulatory factors

a- 1,2 & 4
b- 1,3 & 4
c- 2,3 & 4
d- 1 & 4 only

13) Which of the following two statements is true?

1- Covariance is an absolute measure of the extent to which two or more sets of numbers move together over time.
2- The covariance of a variable with itself is its variance

a- 1
b- 2
c- 1&2
d- Neither of the above

14) In security valuation, there is a three- step valuation process. Which of the following is NOT a step in that process?

a- Analysis of individual companies and stocks
b- Analysis of alternative industries
c- Analysis of alternative economies and security markets
d- Analysis of the local regulatory environment

15) Calculating the value of bonds is relatively easy because the size and time pattern of cash flows from the bond over its life are known. Which of the following does a bond typically promise?

1- Interest payments
2- The payment of the principal on the bond's maturity date
3- Capital appreciation
4- Variable term

a- 1 & 3
b- 2,3 & 4
c- 1 & 2
d- None of the above

16) Assuming all other factors remain unchanged, what would increase a firm's price/ earnings ratio?

a- An increase in the dividend payout ratio
b- A reduction in investor risk aversion
c- An expected increase in the level of inflation
d- An increase in the yield on treasury bills

17) An underpriced stock provides an expected return which is __________ the required return based on the capital asset pricing model (CAPM).

a- Less than
b- Equal to
c- Greater than
d- Great than or equal to

18) If the interest rate on debt is higher than the ROA, then the firm will __________ if it increases the use of debt in its capital structure.

a- Not change its ROE
b- Change its ROE in an indeterminate manner
c- Decrease its ROE
d- Increase its ROE

19) The rate of return that shareholders require as compensation for their contribution of capital is known as the? Cost of Capital

20) Short sellers attempt to Sell high and Buy? Low

30 Marks