Actuarial Society of South Africa

EXAMINATION

October 2019

Subject F205 - Investment

Fellowship Applications

MARKING SCHEDULE

This was felt to be a slightly easier paper than previous sessions, but this was not reflected in the scripts received. The highest scoring marks were clustered closely around the pass mark, with the remainder of candidate scoring Closer to FC and even FD. Higher order thinking questions were also handled in line with previous sessions, but bookwork questions scored par lower than normal suggesting a lack of thorough preparation. Question 3 posed a fairly high bookwork component but was poorly handled in general – perhaps due to time constraints. It did however appear that the allocated time was adequately managed by candidates, with very few not finishing their paper in time.

Please note that this examiner report presents one possible model solution to the questions. Alternative solutions provided are considered and marks awarded where correct points are well motivated.

Question 1

Candidates scored better on parts (i) and (iii) of this question but very poorly otherwise,

Some students didn't understand that both asset consultants as well as multi-managers select managers, thus expertise does not have to be created for manager selection.

For part (ii) most students focussed on factors at transaction date (such as price), but failed to cover post transaction considerations (such as impact on client retention post transaction). Candidates also failed to plan their responses carefully, breaking the question down into components as is done in the schedule. This resulted in a "jumbled" response of unrelated points in many cases with some degree of repetition. Breaking down a question into its underlying components helps to generate the extra marks and ideas needed to score more points – adequate planning of solution sis critical and seems to be absent in many papers and through this paper. For part (iv), many did not read the question carefully and answered on the benefits of single versus multi-managers.

A surprising number of candidates discussed listing a R20m company – which is highly unlikely

i.

- Debt financing
  - Most likely to be financed through a bank
  - Or possibly through a private debt arrangement
  - Amount will be funded for the repayment of either a fixed or linked repayment until the capital amount plus interest is repaid
- Equity financing
  - Ordinary shares – ownership in business will be purchased in return of regular dividends paid from share of profits
  - Preference shares – also ownership of the business, however ranks ahead of ordinary shares for income and capital repayment
    1. Preference shares can either be redeemable or irredeemable

Marks also awarded for convertible debt and other reasonable options such as sale of assets.

Relative advantages and disadvantages:

1. Term
   - Bank debt will likely be a shorter, fixed term commitment
   - Equity investment could be into perpetuity

2. Servicing
   - Bank debt requires fixed or linked regular repayment whereas the dividends will be used to service the shares.
   - The dividends will likely be linked to the profitability of the company, making the shares easier to service in times of crises.

3. Interest rate

- Creditors will rank higher than equity investments, practically meaning that the bank debt will be repaid first before the venture capital will be repaid.
- The IRR on issuing equity will likely include a margin to compensate for this.
- If the company has a good relationship with the bank it may lead to a preferential rate on the loan.

4. Management influence

- The bank will not have any ownership of the company and as such will not be able to influence management of TAC in any manner.
- The venture capitalist will have a vested interest to see that the company succeeds and could try and influence management of the company if the need arises.
- Issuing equity may result in dilution of existing ownership of the company

5. Perceived independence

- Depending on the company buying a stake in TAC, there might be a loss in perceived independence. Bank debt will not have this risk.

6. Access to expertise

- TAC might be able to access expertise from the equity investor whereas the bank will offer a more limited benefit in term of expertise
    - Although, there is a lot of economic, geopolitical and credit analysis and modelling available from banks if they have investment banking arms and indeed may be part of wider financial group

7. Flexibility

- Shares, especially preference shares, can include flexibility and tailored to meet specific needs. Bank debt is relatively fixed with strict restrictions.

8. Feedback and time required to service financing

- The bank may not require regular feedback on the business as long as the debt is being serviced, whereas the venture capital investor will most likely require regular feedback which could be very detailed and thus can be time consuming.

9. Security to be provided

- The bank will most likely require security to be provided whereas the equity investment might not require security.
- Firm likely to lack tangible assets which could be used as collateral

10, There may be tax advantages to issuing debt rather than equity – interest is paid from pre-tax profits ii.

Underlying company

1. Financial strength
   - Analysis of the past 3-5 year's financials (preferably audited) including for expense analysis, assets analysis and debt situation.
   - Projections of income and expenditure post the deal.
2. Risk of expansion failing
   - The increase in potential revenue delivered from the expansion should potentially be valued at a substantial discount as the expertise within the business still has to be created and business written.
3. Level of competition now and expected in the future
   - The insurance company should consider how competitive this market (locally and internationally) is now, as well as expected in the future with the opportunity to grow market share.
4. Existing Client retention in the future
   - What is the expected client retention given the market consolidation?
   - Is there any impact on client retention related to the acquisition by the insurer eg loss of independence (linked to independence point below)?
   - Size of client portfolios – is there concentration risk?
5. TAC's reputation
   - The insurance company will have to assess TAC's reputation in the market to determine if they want to partner with TAC. TAC's reputation will also influence their ability to retain clients.
6. Quality of advice and any potential advice/FAIS issues as well as PI claims (past 5 years) – whether settled or not
7. Governance policies (for example conflict of interest) and levels of indemnity cover
8. Consultant(s) experience/key man/staff turnover
   - This is an advice lead business. The consultant's experience and expertise is critical to the future success of the business
   - Is there any prevailing key man risk
   - What has the staff turnover been over the past 3 to 5 years, especially of the senior consultants?
   - How do they retain staff after the acquisition
   - Any HR related claims or settlements
9. Current shareholding
   - Is TAC fully owned by management or are there other strategic investors to consider

Transaction considerations

10. Opportunity to buy a stake at a discount
    - Clients have been leaving the company and this might be an opportunity to pick up a cheap asset.
    - Even more so should TAC be able to successfully expand their business

11. Return on investment
    - Does the return sufficiently compensate the risk being taken? Calculations such as the IRR or discount payback period will be helpful
12. Prevailing legislation and regulation
    - Will such a transaction be allowed?
13. Tax implications
    - Both on the capital growth as well as income receivable
14. Alignment of interest
    - Will the managers of TAC also be investing in the opportunity to align their interest? If so, how much?
15. Valuation of the asset
16. How will you value the asset at this stage to arrive at the correct price
    - How will the asset be valued in the future? Valuations will most likely be based on a discounted cashflow methodology, but will have to adhere to the insurance company's accounting principles.
17. Size of opportunity
    - TAC is looking for R20m investment into their business which is small to medium depending on the size of the insurance company.
    - The impact on the balance sheet should be limited including the impact on solvency
    - However affordability in respect of free cashflow will also have to be checked.
18. Exit strategy
    - Is there a viable exit strategy?
19. Dividend policy
    - The dividend policy will give the insurance company some insight into how future dividends will declared
    - However it might still be at the full discretion of TAC.

20. What size stake in the business will they own, are there other investors in the business?

Strategic considerations

21. Client integration opportunity
    - There might be an opportunity to integrate clients who would like to move to an umbrella fund into the insurer's umbrella fund;
        - It will be important that regulations such as TCF and FAIS are considered.
22. Cross selling into insurance company's products
    - There might be an opportunity to sell the insurer's products to TAC's clients. What would the consultant's willingness be to support the insurance company's products?
    - If TAC is currently supporting the insurance company, it would make both client integration as well as cross selling opportunities easier.
23. Strategic fit
    - Will TAC strategically fit into the insurance company – people, philosophy, use of products, fee structures etc
    - Is asset consulting an area the life insurer wants to develop?

- Does the company want to develop international asset consulting capabilities?
- Are there other ways to achieve the strategic intent?
- Are there opportunities to use the asset consulting/investment expertise to develop solutions/service clients within the umbrella fund?

24. BBBEE accreditation
    - What is TAC's current BEE rating and will this benefit or detract from the insurance company's status?

Other

- Is there any other interest shown in buying a stake
- Timing of the transaction – will the insurance company be able to invest in time?
- Are there other similar deals to compare this one to?
- Regulatory approval may be required
- Governance – will the investment result in a board or board oversight position or other form of influence/control

iii.

- The company's published financial accounts, management accounts ad business plan
- the financial press and other commercial information providers
- government sources information that a company has to provide – e.g. information provided to the regulator
- discussions with company management and key staff
- discussions with competitors
- Discussion with asset managers covered by the company
- Discussions with clients (if possible)
- Discussion with other investors (if possible)
- Background checks (such as credit checks) on management and key staff

iv.

Advantages of each

- Balanced managers can add value through asset allocation and the interaction of this with security selection
- Balanced managers can compare valuations within and across asset classes
- Balanced managers can reduce volatility by avoiding or down-weighting overvalued asset classes
- Specialist "best of breed" managers can be selected for each asset class to add value through security selection
- Diversification across asset classes can be achieved by regular automatic rebalancing to the SAA
- Asset allocation can be set in context of the liabilities

Disadvantages of each

- Balanced managers can deviate significantly from the SAA which may introduce extra risk
- Balanced managers generally take no cognizance of the liabilities
- Balanced managers can detract (significant) value through their asset allocation
- Specialist managers are restricted to opportunity in their asset class only
- Underperforming asset classes cannot be avoided with specialist
- Specialist may have higher trading costs with automatic (non-discretionary) rebalancing of asset classes, particularly when markets are volatile

v.

1. Management of the fund
   - How will it be structured? How will you convince clients to go with your product rather than the products you have been recommending to date? Credibility?
   - What will make your proposition better – cheaper? Holistic lifestaging solution?
2. Type of vehicle to be utilized
   - Eg unit trust or life pool
   - Cost of required licence
3. Types of funds to fit client need/client liabilities
   - Term, currency and nature of general retirement fund's liabilities need to be considered
   - Will the underlying funds be active, passive or a combination?
   - Will the underlying funds use a balanced or specialist approach?
   - More than one fund will most likely have to be launched to cater for the different client need/liabilities
     - How many funds will be launched?
       - Trade-off between sufficient choice and commercial viability
     - Will they start with just one and grow from there as they develop capability?
4. Who will administer the fund, administration requirements and costs
   - Will the administration be insourced or outsourced and the associated costs of each of the options
5. Client fees
   - What will the impact be on the client's overall fees (TER including asset consulting fees)
6. Loss of customization
   - The ability to customize each client's portfolio will be lost.
   - Will the funds launched cater sufficiently for client preferences and specific requirements?
   - How will the loss of customization impact client retention?
7. Diversification of client portfolios
   - Since the funds will be pooled, greater diversification of the underlying investments might be available
     - However, this might take some time as the portfolios will probably start small and will have to grow to a reasonable size before diversification can be achieved.

    - Can lead to style bias/lumpy portfolios with consequent unintended performance impacts in early periods
    - How many managers can be used while the fund is still small?
    - The use of alternatives might now be available which was previously not
    - Unless in unit trust as CISCA doesn't allow, then alternatives would be lost

8. Asset allocation decisions
    - Will the underlying asset class management be insourced or outsourced?
    - Will the tactical asset allocations be insourced or outsourced?
9. Transition cost of current assets into own funds
    - What will the transition costs be if clients are moved to the funds – how will this cost be justified to clients?
    - Tax implications such as STT when changing administrators/ownership (e.g. into life policy, funds become owned by the insurance company)

Profitability

10. Fees to be charged
    - Base only or performance fees to be included?
    - If performance fees are included, will hurdles be introduced?
    - How do you ensure fair treatment between investors participating at different times?
    - Will base fees depend on asset size? E.g. will a sliding scale be applied
    - Size of portfolio and negotiating power with managers versus competitors
11. Minimum investment amount as well as total AUM required to make this venture profitable
    - What will the minimum investment amount be before the funds will become profitable?
        - If TAC's clients consist of many small clients, this might not be viable.
    - What will the min total AUM be before profitability is reached?
    - Do we know which existing clients may be interested? What is TAC's reasonable expectations of total AUM that can be attracted into these funds
    - Where will seeding capital be obtained for the portfolios?

Regulation and legislation

12. Licensing
    - Does TAC have the right FAIS accreditation (CatII) to manage their own funds?
    - If not, how long will permissions take?
    - Is a hosting or appointed representative service available until scale is reached?
13. Reporting requirements
    - What is the client's reporting requirements and will TAC be able to cater for the increased requirements (for example regulation 28 compliance reporting on a daily basis)
14. Regulatory restrictions on underlying applicable
    - Eg Regulation 28, Cisca
15. Additional costs associated with administration, systems, additional staff as well as compliance such as a compliance officer, training etc
16. Additional capital requirements if Cat II licence

17. Who will subsidise costs until scale/accreditation is achieved

Other

18. Loss of independence and conflict of interest
    - Since TAC will be making a margin from the funds, independence is lost and conflict of interest is introduced
19. Competitive edge
    - What will differentiate TAC's funds from the rest of the market? What are competitors' portfolios and fee structures like?

Question 2

Candidates are advised, in the reading material, to keep abreast of current market and economic events. Aside from a couple of candidates who showed very good insights, the responses to this question suggested very poor preparation in this regard. Candidates struggled to explain why there are contradictory messages from the bond and equity market and it seemed many were unaware of this phenomenon – or what a downward sloping yield curve signified. It was also surprising how few students could discuss the consequences for the economy and markets of a spike in inflation – this being fairly basic economic knowledge. Many students struggled to apply this to the two products in the question, particularly the smoothed bonus portfolio. Part (i) was handled better than the rest of the question, but candidates failed to use this basic bookwork question to generate as many marks as they should have.

i.

Features

- Ranks as one of the most liquid emerging bond markets in the world with more than R120bn daily trade
- More than R2.4tr outstanding nominal
- Nearly 2 thirds of listed debt issued by SA government
- Although it enjoys fairly high liquidity, turnover is, however, restricted to the very large/ benchmark issues.
- The average daily traded value of corporate bonds on the exchange is R2.5 billion, and R122 billion for government
- Market is dominated by short and medium term bonds, not many long term bonds are issued
- Both nominal and ILB are issued by Government

Auction types:

- Irrespective of the type of auction held, the bids are ordered by competitiveness of yield and an auction clearing yield is set such that all bids up to and including bids at the clearing yield total an amount equal to or greater than the amount on offer.
- In a conventional (English) auction, bonds are allotted to these successful bidders at their bid yield.
- In a Dutch auction, bonds are allotted to these successful bidders at the clearing yield.
- In either case, if necessary, bids at the clearing yield are prorated down to match the bonds allotted to the auction size.
- In a conventional auction, all successful bids other than those at the clearing yield suffer from the so-called "winner's curse" in that they are allotted bonds at a yield below the bids at the clearing yield. The most competitive bidders regret not having bid at the clearing yield.
- Because the average yield at which bonds are allotted is below the clearing yield, it could be argued that conventional auctions result in the cheaper funding for the issuer than a Dutch auction. However, there is evidence that bids are more aggressive in a Dutch auction because there is no winner's curse. Some investors, content to purchase bonds at the auction-clearing yield, may bid for (limited amounts of) bonds at very low levels knowing they will certainly be allotted bonds.
- The US Treasury switched to the Dutch auction system some years ago after a study showed that it resulted in more aggressive bidding and consequently cheaper funding. From August

2002, RSA National Treasury has been conducting all primary dealer auctions on a Dutch (uniform price) auction basis. Floating rate note auctions are held ad hoc on a competitive price (English) auction basis.

- Non-competitive auctions: Primary dealers that have submitted successful bids at a competitive fixed-rate bond auction may take up further paper after the auction. Up to 50% of the amount allocated in the competitive auction is available on a non-competitive basis. The non-competitive auction window is open immediately after the competitive auction for 48 hours. The non-competitive bids are allocated at the same yield at which the competitive fixed-rate bond auction was settled.
- Switch auctions: The government has published the rules of switch auctions, which are used to adjust the maturity profile and enhance liquidity. Illiquid bonds will be reduced and more will be added to liquid bonds. Good progress has been made in consolidating smaller, illiquid issues into the “jumbo” benchmark issues by means of switch auctions.

ii.

The contradiction: despite the yield curve predicting looming recession:

- Equity markets near all-time highs may signal a strong economic growth outlook and a sanguine outlook for corporate profitability.
- However the high equity market may be a function of investors using increasingly low discount rates to discount future expected cash flows
- Tax cuts in the US have boosted equity markets
- Equity markets seem to be focused on growth and unemployment
    - Growth in some developed markets (US in particular is strong). The US is currently experiencing the longest expansion in economic growth on record
    - Unemployment in the US is near historic lows

- Yield curve inversions have been good predictors of pending recession in some developed markets
    - In the US: All eight recessions since 1960 have been preceded by a yield curve inversion on at least one day in the preceding year. There has however been one false alarm during this period
    - The predictive ability is weaker in other economies other than the US
    - The rationale for yield curve inversions predicting recessions is possibly explained by the long end of the yield curve falling when recessions loom as investors expect central banks to lower rates to stimulate growth

Why increasing incidence of negative-yielding bonds?

- Low (and negative) long bond yields are a sign that investors are expecting very low economic growth and very low inflation.
- By buying a negative yielding 10-year bond an investor is guaranteed to lose money in nominal terms if the bond is held to maturity. The real return on the bond may however be positive if the investor expects sustained deflation over the term of the bond. This would imply a very weak economy
- Negative yielding bonds may be caused by central banks buying these bonds ie quantitative easing
- It may also be caused by insurance companies and pension fund regulations forcing them to buy these assets regardless of valuation

iii.

Chances of:

- Breakeven inflation, as measured by the difference between the yield on nominal bonds and the yields on inflation-linked bonds of the same term, is pricing in a low probability of high inflation returning
- The weak consumer environment (rising unemployment, weak retail sales growth, weak credit growth) means there is limited demand pull inflation forces
- Similarly weaker commodity prices mean less change on cost push inflationary forces
- However a sharply weaker ZAR may lead to higher input prices
- The recent spike in the gold price may portend a return of higher inflation
- Credit-ratings downgrades followed by higher interest rates on government debt, weaker currency, followed by government printing money to inflate away debt may lead to inflation.

Economy in general:

- The primary mandate of the South African Reserve Bank (SARB) is to achieve and maintain price stability in the interest of balanced and sustainable economic growth
- Price stability helps to protect the purchasing power and living standards of the SA population. It provides a favourable environment for investment and job creation, and also helps to maintain and improve international competitiveness.
- SARB follows an inflation targeting strategy whereby inflation is to be kept within a target range of 3-5%.
- In the scenario described in the question where inflation rises above the top end of the target range for a sustained period, the SARB is likely to raise interest rates to bring inflation to within its target band.

- Higher short-term rates mean higher borrowing costs for consumers which reduces consumer disposable income as most mortgage and car repayments are linked to prime interest rate
- This together with higher inflation depresses consumer spending and the demand for goods and services
- Corporate profitability is therefore negative affected in the short term
- Employees are likely to demand higher wages (stoke wage inflation). This may encourage firms to reduce staff numbers and
- Higher interest rates means higher debt servicing costs for corporates with floating rate debt.
- Higher cost of borrowing also increases the cost of capital for companies and may discourage investment (ie hurdle rate for projects will rise and some projects may not meet the required return hurdle and thus be shelved).

  Higher rates may encourage people to save more rather than borrow

Impact on financial markets:

- Higher rates means investors may use higher discount rates to discount future cash flows from financial assets This means a fall in asset prices
- SA equities with offshore earning may receive a boost from a weakening rand as a result of high inflation
- In addition higher rates are bad for bonds: investors demand higher yields in order to compensate for higher inflation and maintain an adequate level of real yield. A rise in

bond yields reduces bond prices and reduces the return from bonds. The SARB raising short rates may also lead to higher long bond rates

- Initially bad for equities as the curtailed economic growth will hurt profits.
- Also stock market volatility may increase during times of high inflation and rising interest rates. However eventually most companies can pass on price increases to customers and profits normally catch up in time
- Exchange rate may strengthen as investor are attracted by higher yields. Although the opposite is true if the higher rates are expected to hurt growth
- ILB may become more attractive and real yields may fall here

Effect on insurance company:
Smoothed bonus

- Most SB funds are balance type funds eg 60% equities, 40% bonds
- Lower asset prices means lower bonuses to be declared
- The lower fund value also means lower fees for the company (fees are usually based on AUM)
- May mean removal of non-vested bonuses for customers withdrawing from the fund
- Vested bonuses may not be removed. This may mean shareholders have to honour the guarantee of vested bonuses if BSR is negative
- The relative stability of smoothed bonus products compared to market linked products may result in increased new smooth bonus business being written in the near future
- If negative BSR is large then may need to mauch a new series or else investors will be “filling the hole” before sharing in returns, which they will be reluctant to do meaning new investment will dry up.
- Impact will depend on the size of the Bonus stabilisation Reserve

Fixed annuities

- Depends on degree of duration matching of assets and liabilities
- Liabilities are long duration (individuals can buy annuities from age 55 and may live to 100+)
- Liabilities usually matched using bonds
- Bonds of sufficient duration may not be available so the duration of the assets backing the liabilities may be shorted than the duration of the liabilities. A rise in long rates would mean liability values falling more than the value of assets.
- This would result in a release in reserves and a profit for the company
- High inflation erodes the purchasing power of a fixed annuity. The clients of the insurance company may find themselves not being able to survive on the reducing real income provided by the fixed annuities
- This may result in low new fixed annuity business being sold
- On the other hand higher interest rates makes fixed annuities cheaper, and this may boost sales of annuities

Question 3

This was the most straightforward question of the paper, but many responses did not show the insight one would have expected from an F205 candidate – answers more closely reflecting a response at the F100's level. Many candidates did not appreciate that a charitable foundation is highly unlikely to invest directly in commodities. Responses to (iii) and (iv) were quite generic and did not use the specifics of the question – commodities and a charitable foundation – to generate extra points. For part (v) points around the timeframe of the hedge, or the options for partial hedging were consistently missed.

i.

(a)

- JSE RESI has outperformed FINDI significantly over this period
- The index has risen from a very low base as commodity prices collapsed in 2015/16. This was preceded by a commodity boom over 2008-2014
- Sasol was removed from the index during the period. If it had stayed in the index the returns may have looked different.
- A weaker and has help commodity prices (in ZAr)
- Also SA industrials have performed very poorly over the period and as well as financials due to
    - uncertain political and economic outlook
    - Poor economic growth and persistent high unemployment
    - Risk of further credit rating downgrades
    - International investors moving away from emerging markets as a whole

Other developed equity markets such as the US have, by comparison, done very well.

(b)

- Commodity prices (and hence shares) tend to follow a boom bust cycle.
- Prices are very volatile, and correlated to outlook for global economic growth (particularly in developing markets).
- The outlook may be somewhat more tempered as concerns remain around global growth due to:
    - Slowdown in China
    - Trade wars will impact manufacturing in affected areas
    - Brexit and Europe uncertainty
    - Oil prices declining – oversupply and low demand globally
- However the above has may lead to further increase in gold prices
- If we have seen them rise to such high levels we may be in for a fall in prices (copper prices have fallen recently) if one believes in mean reversion
- Returns from this sector are highly dependent on type of commodity, for example agricultural prices are impacted by different range of factors such as unpredictable weather which has increased in severity.

ii.

a)

Definition of a commodity is any product that can be used in commerce i.e. any goods that are traded. For most people the term refers to internationally traded agricultural goods such as coffee, fuels and raw materials such as copper.

The principal benefits of commodity investments are:
• Potential for higher returns,
• Diversification due to a lack of correlation with existing assets or by exposure to underlying risks that are uncorrelated so reducing the overall portfolio risk.

- Inflation hedging

- Institutions do not usually invest directly in commodities as this would involve shipping and storage of large amounts of material and institutions do not have the necessary skills or facilities.
- While it can be argued that commodities are suitable investments for institutional investors they are not widely held.
- It is argued that there is no strong historical evidence for a real return from commodities and that the markets are volatile being driven by a number of factors unrelated to the underlying economic factors that affect institutional liabilities.
- No income from commodity investment is a negative for a foundation which is constantly paying out benefits
- There is a negative perception about investing/trading in commodities
- It may not be permitted as an investment by the foundation

b)

Ways to invest in commodities with advantages/disadvantages:

Should an SA institution wish to gain exposure to commodity price movements it can do so in 3 main (other) ways.

- The most obvious is via commodity derivatives, which are widely traded on major global exchanges and the JSE. Options and futures are available.
- The futures which are available to trade on JSE fall into five main categories :
- Energy, Precious Metals, Base Metals, Agricultural, Meat & Live Stock.
- The specification of a commodity futures contract is considerably more complex than that of a contract for a future based on an investment index as it is necessary to specify contract size, delivery dates, quality of product, method of packaging etc.
- Can obtain exposure with only a small outlay for margin
- Cost of carry and convenience yield will cause the price of the derivative to deviate from the underlying commodity price

- There are a number of commodity price indices produced by investment banks,
- Investing directly in these indices or in futures contracts based on these indices allow some diversification and avoid the danger of having to take delivery of the product.

- Alternatively institutional investors can invest in companies whose share price is influenced by commodity prices. Typical examples of this are the oil & mining companies.

- This will dilute the pure commodity exposure as these shares are exposed to general equity market movements

- Investing in these companies also overcomes the problems of investing directly in the commodity itself and prices are generally less volatile than the commodity futures.

- There are, however, a number of disadvantages if these companies are used as a proxy for commodity investment, these are:
- It is unlikely that there will be exposure to just one commodity.
- The company s management may alter the exposure via acquisitions or disposals or by hedging its position.
- The company may be geared or hold cash thus altering the overall return.
- The company s share price may be influenced by other factors.
- The company will incur various operating expenses which will dilute the overall return.

- The third way is to invest in commodity etfs/etn's. There are a range of commodity etf's listed on the JSE, for example NEWGOLD and NEWPLAT.
- One may not be able to build a diversified commodity portfolio of these due to availability.
- Take care whether the underlying is actually the commodity or just a commodity future in which case certain risks such as credit risk are introduced.

iii.

- Investment Objectives and IPS for the foundation
- Tax status of the foundation
- What are the details of the foundation?
    - Size of fund
    - Funding position
    - Future financial commitments
    - Appetite for risk
    - Regulatory Permitted assets
    - Socially responsible, sustainable or ethical investment policies
    - Existing asset management arrangements and mandates
    - Current exposure to commodities within existing local equities component
    - Governance and administration structure
    - Justification for existing investment policy
- More information about the breakdown of the liabilities which could then be split into short term, med term and longer term
- Are liabilities real or nominal – likely real
- Liquidity requirements which are likely to be high
- Likelihood of future money coming in - linked to profitability of company which may be highly volatile – what industry is the company in.
- Expenses in running the foundation
- Are all liabilities local? – it seems so.
- What is the outlook for future income – how are donations received?

- The nature of the foundation's prospects – if these prospects are to, for example, support mining communities or rehabilitation of environment projects then it's possible that exposure to the mining shares is not appropriate. (also award marks if point is made in part iii but do not award marks twice)

iv.

- Matching of liabilities — **nature**: real / fixed - commodities can be argued to perform well in inflationary environments hence provide some inflation matching although they are neither fixed nor real in nature.
- **Term —** can be argued that commodities are short term, not appropriate for matching longer dated liabilities.
- **Currency** — commodity prices commonly in US dollars, liability in ZAR —may require currency swap, introducing further element of cost
- **Certainty** — commodity prices can be volatile in both the short and longer term. There is no direct link between their price movement and that of the liabilities. This will introduce volatility into the funding position or the ability to continue to pay benefits.
- Commodity holdings do not produce income and are therefore not suitable for "matching" future cashflow commitments.
- It is possible to make significant profits from investing in commodities in short periods, however there is also the opportunity to lose large amounts in equally short periods.
- Diversification — commodities offer significant real returns that are produced by doing real economic work within the economy.
- Behavioural – chasing good past returns over last 3 years, leave such decisions to asset managers
- The returns accrue to long only investors without the need for *active* management but there will probably remain the need for third party management in terms of index/commodity selection, market access, trading.

v.

- When the SA based fund invests in, say, commodities it is exposed to movements in the ZAR/dollar exchange rate
- These movements may increase the return of the fund in rand terms or reduce it.
- The decision to invest in commodities can be separated from that of investing in dollars by hedging the currency exposure back into rand.
- The hedging can be carried out by selling dollars back into rand using forward contracts.
- A forward currency contract is an agreement to sell a certain amount of one currency for a certain amount of another currency at a future date.
- The forward foreign currency market in the major currencies of the world is extremely liquid, has low dealing costs and is conducted over the telephone by major international banks.
- It is important to understand what the goals of the trustees are in hedging:
- Is the goal to lower portfolio volatility?
- Is the goal also to reduce the cost of hedging exposures?
- Difficult to hedge implicit currency exposure.

- The maturity of the forward contract has to be decided. This could be the expected time horizon of the investment which could be very long.
- We cannot be sure of the value of the commodity portfolio at the end of a particular holding period. So one difficulty with this type of hedging is in deciding the amount of currency to sell forward at the end of the investment time horizon.
- For short investment time periods – up to six months – investors tend to just sell the amount of the original investment forward.
- For longer holding periods and in the case of the foundation, investors tend to roll over the forward contract every six months selling forward the value of the portfolio at the beginning of the six month period.
- The problem here is that the future roll over rates are unknown at the outset. There is still therefore some residual foreign exchange rate risk in such circumstances.
- Need to frequently rebalance the currency overlay - and this costs money;
- Alternatively one could reduce the frequency of rebalancing by setting tolerance limits for the movement in FX rates before rebalancing is done.
- It is essential to understand that not hedging all of the foreign currency exposure is also a decision in relation to foreign currency exposure.
- Not hedging the exposure effectively introduces another asset class – currencies – into the portfolio.
- May consider taking a position in between these two extremes of no hedging and fully hedging the foreign exchange exposure.
- This will reduce some of the costs of hedging
- Managers may hedge a fixed percentage – like 50% - of the exposure using forward contracts.
- Or sometimes they vary the percentage of the exposure hedged depending on the prevailing outlook for the currency relative to ZAR.
- They could hire a separate specialist currency manager for currency exposure albeit at additional cost.