

# EXAMINATIONS

September 1999

**Subject 401 — UK Fellowship Investment**

*Paper One*

EXAMINERS' REPORT

**1** (a) **Identification:** Steps for effective identification would be

- make a high level preliminary risk analysis to assess overall viability
- hold a brainstorming session with project experts and senior internal and external colleagues used to strategic long term thinking, with the aim of identifying likely and unlikely potential risks, and to discuss their likelihood, frequency, interdependency and consequences
- carry out a desktop analysis to supplement the above results, identifying any further risks, and mitigation options, using a general risk matrix
- research similar projects
- obtain considered opinion from experts familiar with the details of the project and its financing plans
- document identified risks in a risk register, cross referring to interdependent risks
- ensure both upside and downside risk is covered

The risk matrix should consider stages of the project, with each stage considered under the following major risk categories:

political, business, economic, project, natural, financial and crime.

Identification of risks can be sub-categorised within these broad headings.

In this particular case, with an East European country involved and payment of the award being provided by an equity stake in the country's electricity utility, the political and economic risks are particularly relevant.

**Analysis of risk:** The project team should analyse the risk identification conducted so far. The analysis will ascertain the frequency and consequences of the risks, concentrating on independent risk.

Frequency will be assessed by consulting experts or by comparison with statistics from similar projects.

The financial risks will be expressed in net present value terms, possibly calculated from a probability distribution of outcomes.

The total risk estimate will be calculated by assessing the net present value of the distributions of cash flows arising under different probabilities.

It is necessary to take care to ensure the consistency of the approach to the calculation of the distribution of NPVs for each risk independently and for the project as a whole.

In order to simplify calculations, risks with low NPVs which do not have serious consequences will be discarded.

- (b) **Obtaining a distribution of NPV's:** There are two principal methods - deterministically and stochastically.

Although stochastic modelling might appear superior, it often requires too many assumptions to be confident of results. A deterministic model allows greater visibility and concentration on key factors and assumptions.

Deterministic modelling involves the construction of a series of future scenarios, each representing a combination of possible outcomes for major risk events.

Each of these outcomes will have its own probability of occurrence.

It is important to try to contain the range of sub scenarios since they combine multiplicatively.

If the scenarios cover all possible outcomes, the result will be an approximate probability distribution of the entire project.

Some of the resulting NPVs may be unfavourable e.g. unacceptably low or negative. However, depending on their probability of occurrence, the company may be prepared to accept these risks.

*Comment: This question was answered particularly badly.*

## 2 The key factors to look at are:

The track record

- How has Net Asset Value past performance compared with a suitable U.K. smaller companies index and also other investment managers in the same category.
  - The consistency/volatility of the performance record relative to the benchmark index.
  - Whether the same fund manager/fund management team has been responsible for the record, and the depth of management resource.

- The investment management style (value, growth, or a combination) of this fund manager, and whether this style has been adhered to.
- The discount (if any) to the underlying Net Asset Value and the likelihood of this being narrowed
  - e.g. is there a wind-up clause provision, or is there a likelihood of a hostile bid by another investment manager to try to unlock shareholder value.
- The size of the trust and expense ratio (smaller funds tend to have a higher expense ratio).
- The relationship between the directors and the investment manager e.g. an independent board is more likely to remove an underperforming manager.
- The competition: are there better investment trusts specialising in listed UK companies with small market capitalisations?
- What are the prospects for listed UK companies with small market capitalisations?

(ii) The advantages are:

- **Risk:** If the client's existing property becomes problematic in any way, there could be a substantial loss in value./ A PUT(property unit trust) could be found that offers access to a large portfolio diversified by sector, region, tenant and lot size.
- **Liquidity:** It might be difficult to sell the single direct property holding at the time the client wants. PUT's are usually fairly liquid for both entry and exit and obviously can be dealt in small lot sizes.
- **Liquidity requirements of the unit trust:** an open-ended CIV like a property unit trust tend to maintain high levels of liquidity in case of heavy withdrawals so they are really a mixture of cash and property assets.
- **Management:** Direct property can take a lot of management time, often disproportionately compared to the portfolio size. The PUT manager is responsible for investment strategy and property management, usually for a fixed percentage fee relative to the PUT's underlying asset size. The client will lose control over the investment management of the portfolio if he invests through a property unit trust.
- **Performance:** A well-run PUT can outperform the relevant broad U.K. property index e.g. IPD index. The client could spread his £5m investment across a number of different PUT managers to get a good spread of property investment management expertise.

- **Taxation:** The client would have to pay tax at 40% on rental income less expenses whereas in a PUT only 20% corporation tax is payable on rental income less expenses.
- Investing in a PUT will give the investor exposure to a more diversified portfolio of properties including exposure to some large properties which she would not be able to access with £5m to invest.
- PUT have no gearing so there is no prospect of introducing leverage to the portfolio compared with direct investment where £5m could be used to borrow a further £15m and invest £20m in property.

*Comment: This question was answered well.*

**3** (i) The main factors are:

1. The guaranteed level of payment.

There is a low guaranteed level of payment which is payable even if the fund fails to achieve the guaranteed rate of return. While it is extremely unlikely that a fund would not exceed this minimum return rate over the medium-term, some matching of this guarantee is desirable, through fixed income securities.

2. Declared Reversionary Bonuses

Each year the Actuary declares an additional bonus called the reversionary bonus, which once declared must be honoured irrespective of the future returns generated by the fund - again some level of matching of these payments is desirable by fixed interest securities.

3. Policyholders Reasonable Expectations

The life company has a duty to meet "policyholders reasonable expectations". Most life offices issue a With Profits Guide to set out its investment policy and bonus philosophy and help shape such expectations. Reasonable expectations are likely to include

- that the investment policy follows that stated in the With Profits Guide.
- that at maturity there is a terminal bonus payable under normal investment conditions.
- that the return is largely real (i.e. higher when inflation is higher).

The life company will also be concerned to achieve investment returns in line or better than its main competitors.

4. Other Liabilities

Other liabilities may be written in the with profits fund, e.g.

- Non-profit liabilities, e.g. term assurance and annuity business - these should usually be matched by fixed interest securities.
- Future expenses of the office ... generally “real” in nature.

5. Term of Liabilities

The term of the liabilities will depend on the type of business written, its maturity profile and the sales performance of the company. Regular premium contracts tend to be long-term while single premium business may have a shorter term. Obviously the more mature the liability profile, the more matching is required.

6. Liquidity Requirements

Some liquidity will be required to meet day-to-day surrenders, but in general for a fund writing new business, liquidity requirements are generally not a constraint.

7. Investment Freedom

The extent to which assets exceed liabilities will determine the investment freedom. Each year the life company must show it can meet the solvency margin and mismatching reserve requirements.

The basic valuation rules for a With Profit fund are generally not restrictive, but biased to giving investment freedom except to avoid concentration of investments.

Under the admissible assets rules, a maximum amount of investment in certain assets (e.g. a single property or a stockmarket company) can be counted in the statutory valuation.

Some assets are inadmissible (e.g. works of art) and others known as “approved securities” (e.g. gilts) can count without limit.

The maximum valuation interest rate used to discount the liabilities is 97.5% of the yield on the fund's assets. The low running yield on equities means that investing heavily in equities makes it harder to demonstrate solvency.

Generally speaking, the bigger the fund's solvency margins the higher the “real assets” exposure of the fund, and also the greater freedom to mismatch currency liability by investing in international assets.

8. Other Factors

The asset mix may also be determined by such issues as taxation issues, tactical asset allocation decisions of the manager, corporate constraints set by management and the skill set of the management team.

- (ii) Under a unit-linked contract the benefits are linked directly to the investment performance of the fund. The key consideration is any stated objective of the particular unit-linked fund.

There are very few, if any, investment restrictions, and generally the aim of a managed fund is to outperform the peer group. Generally such managed funds would hold a significantly higher equity content (70% - 80%) than a with profit fund, and would tend not to be concerned with yield, but rather with total return.

The size of the fund may be significantly smaller than of the with-profit fund which may mean that it holds no property investment.

*Comment: This question was answered well.*

- 4 (i) Put-call parity holds only for European options. However it is useful in deriving upper and lower bounds for American options.

$$P > p$$

Therefore using the put-call parity relationship:

$$P > c + Xe^{-r(T-t)} - S \quad (A)$$

$$C = c \quad (B)$$

Combining equations A and B we have  $P > C + Xe^{-r(T-t)} - S$

Hence  $C - P < S - Xe^{-r(T-t)}$  .....(Equation 1)

Consider two portfolios G and H where the options have the same expiry date and exercise prices.

G: American put option on a non-dividend paying stock and one unit of that stock.

H: European call option and an amount of cash equal to the option's strike price (X say)

Let's assume that the cash in portfolio H is invested at the risk-free rate of interest. If the put option is not exercised early, at time T, portfolio G is worth

$$\text{maximum}\{X, S_T\}$$

Portfolio H is worth

$$\text{maximum}\{X, S_T\} + Xe^{r(T-t)} - X$$

Portfolio H is therefore worth more than portfolio G at time T.

A call option on a non-dividend paying stock should never be exercised early but in certain circumstances, it may be optimal to exercise a put option on a non-dividend paying stock. So let's consider early exercise of the put option.

If the put option in portfolio G is exercised early at time T, the value of the portfolio will be X. Even if the call option were worthless, portfolio would be worth at least  $Xe^{r(T-t)}$  at time T which is more than what portfolio G is worth at that time.

Portfolio G is always worth less than portfolio H.

Therefore  $c + X > P + S$  or  $C + X > P + S$

or

$$C - P > S - X \dots\dots\dots(\text{Equation 2})$$

So combining equations 1 and 2 we have

$$S - X < C - P < S - Xe^{-r(T-t)}$$

Substituting the details we have

$$31 - 30 < 4 - P < 31 - 30e^{-0.08(0.25)}$$

$$\text{Hence } 2.41 < P < 3.00$$

- (ii) If the price of the American put is substantially greater than the upper bound of \$3.00, an arbitrageur could sell the put option (write a put option), go short of the stock (borrow it and sell it) and buy the corresponding American call option. This will earn her at the very least

$$31 + 3 - 4 = \$30$$

This can be invested at the risk-free rate of interest.



At some time during the three month period the American call or put option will be exercised at which point the arbitrageur will pay out \$30, acquire the stock and close out the short position all at a profit.

*Comment: A preliminary investigation of scripts after the examination revealed that Question 4 was not within the Core Reading. Few candidates scored more than one mark. This question was eliminated from the marking schedule, and the examination was marked against the remaining 8 questions (90 marks).*

- 5 (i) A repo is an agreement whereby one party sells stock to another with a simultaneous agreement to repurchase it at an agreed price on a later date. A reverse repo is the term used to describe the opposite side of the agreement.

In essence repos are collateralised lending and borrowing.

Repos are conducted largely between professional investors.

Repos tend to have a very short term ranging from overnight out to one month in about 80% of cases.

In the classic or documented repo (the type recommended by the Bank of England) title to the gilts is actually transferred but the person holding the collateral must manufacture dividends or coupons for the other party.

One way to classify repos is “general collateral” and “specific” repos. In a general collateral repo, funds are received against gilts details of which are not specified; in the specific repo, the gilt against which funds are received is specified.

Market rates on specific repos reflect the relative scarcity of the gilt in the repo and stock lending markets. Specific repo market rates are generally below those on general collateral repos. (The spread is about 10bp but candidates were not required to know this to get the marks)

There is no formal market making system in gilt repos.

A large number of financial institutions will quote repo rates on request.

*(Note: There are no SEMB left in the market; a few SEMB have made the transition into the new gilt repo market. Before the gilt repo market, UK funds - owners of about 50% of all gilts - lent their gilts to GEMMs via SEMB. After the gilt repo market was established, UK funds lend gilts directly to GEMMs.)*

The stock lending and gilt repo markets operate along side each other. From time to time a GEMM may sell gilts that it does not own (short position). In order to fulfil its obligations to deliver to the party to

which it sold the gilt it will need to either borrow the gilt in question or use a reverse repo.

Repos enhance the links between the money market and the bond market in London. The gilt repo market is liquid and properly regulated.

Borrowing a gilt entails putting up collateral and paying a fee to the lender of the gilt.

- (ii) (a) Gilt strips are zero coupon bonds created by separating the individual coupon payments and the principal repayments of certain gilts.

There are currently seven strippable gilts all of which have the same coupon payment dates - 7 June and 7 December.

The longest maturity strippable gilt is the 8% Treasury 2021 with a redemption date of June 7th, 2021.

Each zero coupon bond created in the stripping process carries the guarantee of the UK government and so has the same credit quality as a UK gilt.

All coupon strips with the same payment date are fungible (i.e. will be treated as equivalent even though they may have arisen from different gilts).

The price-yield relationship for gilt strips is given by the formula:

$$P = 100 \times (1 + 0.5 \cdot y)^{-n - (r/s)}$$

Where P is the price per £100 nominal of the strip, y is the gross redemption yield (with semi-annual compounding), n is the number of complete half-years (referred to as quasi-coupon periods) to the redemption date of the strip, r is the exact number of days from the settlement/issue date to the next quasi coupon date and s is the exact number of days in the quasi coupon period in which the settlement date falls.

[Marks were given for the formula and the correct explanation of the symbols.]

Gilt strips have greater duration than coupon bearing bonds of the same term to maturity.

Gilt strips remove reinvestment risk associated with coupon bearing gilts.

- (b) A portfolio of annuities is likely to have monthly payment dates; at present gilt strips are only available with twice yearly payment dates - 7 June and 7 December. To get over this problem maturing strips would have to be invested for up to up to five months to meet monthly annuity payments. The issue then arises as to what rate of interest should be assumed for such investment periods.

Even a large (in terms of number of annuitants) portfolio of annuities will exhibit volatility in payment outgo due to statistical fluctuations between actual and expected mortality. This will make it difficult to exactly match payment outgo to strip maturities even if the payment outgo dates and strip maturity dates were the same.

It may not be possible to get gilt strips with sufficiently long terms to maturity to match annuity payments due several decades from now.

**6** (i) Advantages

The principal advantage is the potential for higher returns - because of the higher level of risk

Lack of information may mean that pricing anomalies may exist; from which an investor with good information may be able to profit

May give a further level of diversification to a portfolio if the sector is largely unquoted.

Disadvantages

The shares are unmarketable; finding a buyer is one problem, getting a valuation is another and negotiating a price is yet another; the whole process is likely to take longer and cost more than the sale or purchase of quoted equities.

There is much less publicly available information about unquoted companies compared with quoted companies.

Valuation is a difficult problem for unquoted company shares.

In general, the risk level of unquoted shares is higher than that of the well capitalised quoted shares.

- (ii) To get a diversified portfolio of unquoted equity investments a specialist venture capital company would need to:

Spread its investments over several different industry sectors.

Spread its investments between small companies in the very early stages of growth, providing finance for longer established companies to finance the next stage of growth and management buy-outs/buy-ins.

The problem with this high level of diversification is that the specialist venture capital company would need a wide spread of expertise to be able to understand the many industry sectors ...

... and the different issues that arise between small start-up companies and sophisticated management buy-outs.

This adds to the costs of the venture capital company as it requires a large staff each with their own specialist expertise. This is certainly not an option for a small venture capitalist company.

Finding sellers at a good price – entrepreneurs tend to value their companies higher than venture capital firms do – and quantifying the risk when there is limited information are two other problems.

*Comment: This question was answered well.*

- 7** (i) A discussion of the four main methods is provided below.

**Full replication** involves holding every stock in the chosen index in the index proportions.

This can be an expensive approach to matching the investment performance of the index if there were a lot of stocks in the index.

Imagine the dealing costs involved in full replication of the FTSE All Share Index as stocks move in and out of the index and dividend income is reinvested in the correct proportions across the index.

**Stratified sampling** entails purchasing a sample of the stocks in the index so that the proportions of the fund in the specified industry categories matches that of the index.

Less stocks are required compared with full replication and this should lower transactions costs.

The method requires a significant statistical analysis to find the sample that best matches the performance of the index

**Optimisation** entails constructing a portfolio that matches the index in certain specified fundamental factors (e.g. price earnings ratio, capitalisation, and beta) that are known to affect performance.

Choosing the fundamental factors in the first place is a problem that requires high level analytical skills - choosing appropriate stocks

thereafter is yet another problem. This approach requires ongoing analysis and computing power to carry out the optimisation

Again the method has the advantage of requiring less stocks than full replication and hence lower transaction costs.

**Synthetic funds** are constructed using derivatives on the underlying assets rather than holding the assets themselves.

For example, a passive fund manager could hold cash (perhaps in the form of T-bills) and futures on the index.

If futures are underpriced relative to fair value the manager may outperform an index fund that holds stocks directly and vice versa.

The necessity to roll over the index futures every few months can give rise to basis risk which may cause the fund to outperform/underperform a portfolio holding the stocks directly.

- (ii) Where the index being matched is a very broad market index like the FTSE All Share Index, indexation exposes the investor to market risk whereas active management which aims to beat the performance of the index exposes the investor to both market and stock specific risk. Index portfolio managers tend to deliver a narrower range of returns compared to active managers targeting the same benchmark. This has lead some observers to argue that the average active manager provides a poor risk-return trade-off relative to the average index manager targeting the same benchmark index.

Index funds tend to beat the average active manager which aims to beat the same benchmark index.

Markets are relatively efficient - information is disseminated quickly and simultaneously to all major market participants who take the correct action, which is quickly reflected in stock prices - and any outperformance by generated by an active manager does not justify the extra dealing and fund management costs.

The problem with active management is that while some active managers do indeed produce returns well in excess of the benchmark the question is can they be identified in advance and can they consistently outperform the index.

For funds subject to taxation active fund management means an earlier incidence of capital gains tax. Index funds have a very low level of turnover, so until all or a part of the fund is disposed of it (and ultimately the investor) pays minimal capital gains tax.

**8 (i) Speculation**

Exchange-traded derivatives could be used for speculation; effectively betting on a strong view of a particular market movement.

The difference between speculation using futures or options and speculation using the underlying asset is that buying the underlying asset requires an initial cash outlay equal to the total value of what is bought whereas entering into a futures contract or an option contract requires a fraction of the initial cash outlay. Thus a much higher level of leverage (gearing) can be achieved. Options give even more leverage compared with futures contracts.

However such practice is very risky and it has no place in the investment portfolio management of a life office.

**Arbitrage**

Arbitrage involves locking in a riskless profit by simultaneously entering into two transactions in two or more markets. An example is selling futures and simultaneously buying the underlying asset when the futures price is above its theoretical value.

Using various combinations of options and the underlying instruments portfolios with the same return but with different constituent parts can be created. Arbitrage opportunities can arise when the prices of these different portfolios get out of alignment and a riskless profit can be made by selling the expensive portfolio and buying the cheaper one.

In practice only very small arbitrage opportunities are observed in prices that are quoted in most financial markets. Further transactions costs would probably eliminate the profit for all but the very large investment houses who face very low transaction costs.

**(ii) Portfolio Management**

Futures can be used to manage the reallocation of assets from one market to another.

For example, to switch a significant proportion of a portfolio from equities to gilts, it can take considerable time to sell the equities without depressing the price and buy the gilt without pushing up the price. If the switch is a long term one, the underlying securities can be bought and sold at favourable prices over a longer time period while the actual asset reallocation is put in place immediately using futures - buy gilt futures and sell equity futures in appropriate amounts.

Further if the move is just a short term one, selling equities and buying gilts could crystallise capital gains and a round trip like this can be relatively expensive in terms of dealing costs and stamp duty.

Futures allow a fund to take the short term view by buying gilt futures and selling equity futures without touching the underlying portfolio of equities.

Not only is this cheaper in terms of dealing costs but it also reduces the resources required in the back office compared with the alternative cash market approach to effecting the same strategy.

A fund manager could also use futures to eliminate any loss (and also profit) from market movements leaving only her stock selection profit by selling index futures at the same time as buying individual securities.

Call options on equity indices can be used to gain exposure to upside movements in the markets; put options can be used to remove exposure to downside movements in markets.

Calls and puts can be used to change a fund's exposure to an asset category or to change a fund's exposure within an asset category. An example of the latter would be to reduce exposure to the US equity market within an international equity portfolio.

#### Options and income enhancement

In a flat or falling market the fund could increase its income by writing covered calls i.e. writing options on stocks they already hold.

This allows the fund to improve its performance relative to those of its competitors which don't adopt this strategy. The cost of the strategy is the loss of potential gains above the exercise price of the call options that would have arisen if the market rose.

#### Hedging

Hedging allows a fund manager to reduce a risk that the fund already faces.

Hedging using futures, for example, involves taking a long or short position in a number of futures contracts which is the opposite to the position held in the underlying asset (also referred to as the "cash market"). Conceptually, a loss made in the cash market will be offset by an approximately equal gain on the futures position.

A key point to bear in mind regarding hedging, is that hedging makes the outcome more certain but it does not necessarily make the outcome better relative to the unhedged position.

Take a fund's UK equities holdings; let's suppose the holdings are well diversified across the FTSE 100 stocks. The fund could hedge against a short term fall in market value by selling stock index (FTSE 100) futures contracts. Any subsequent fall in the underlying value of the

portfolio would be offset by a rise in the value of the futures position and vice versa.

This technique is very useful where say a fund is going to sell its holding in say two or three months and it wishes to avoid a fall in market values. However, if the market rises there will be a loss on the futures position approximately equal in value to gain on the underlying equities so the strategy does close off the opportunity for the fund to participate in any upward movements in the underlying assets while the hedge is in place.

The approach can also be used with a bond portfolio by using the long gilt futures contract. However, the long gilt futures contract is quite long dated (15 years) which makes it volatile. The "hedge ratio", the number of futures contracts required to hedge a bond portfolio, has to be calculated using the duration of the bond portfolio and that of the cheapest-to-deliver gilt underlying the futures contract.

- 9** (i) The securities markets may lack liquidity and depth making it difficult for foreign investors to buy or sell securities in any reasonable volume at or close to the quoted market price.

The market may represent a very small proportion of the world index or may not even be included in the world index.

There may be restrictions on foreign ownership of the shares of certain quoted countries.

Language problems: listed companies may not publish their accounts in English

The accounting policies adopted may not conform to international accounting standards making it more difficult for foreign investors to assess companies listed on the securities markets of that country.

Dealing costs (bid/offer spreads and commission levels) may be very high and transaction taxes, like stamp duty or sales taxes may exist.

Less information about the securities markets and the economy in general may be available than in the home market.

There may be withholding taxes imposed on foreign investors which cannot be reclaimed by them or can only be reclaimed at great expense and after a long time elapses.

There may be no derivatives markets in existence which would allow foreign investors to hedge their exposure to the bond and equity markets of the country or to gain exposure to the bonds and equities of the country without buying the underlying assets.



The government bond market may not offer a wide range of bonds with different coupons and terms to maturity. Also there may be no government bond repo market in existence.

The stock exchange dealing system may be outdated and make it expensive for international securities firms to deal in that market.

Settlement systems may be slow and paper based - making them expensive to use and cumbersome.

Lack of adequate price reporting and transparency in the conduct of securities market dealings.

There may be no index of bond or equity prices with which the performance of the market may be tracked.

(ii) Possible functions for a securities market regulator

Set and review financial regulation policy

Maintain confidence in the system of financial regulation.

Policing the rules of the regulatory environment, investigation of alleged breaches of the rules and the imposition of sanctions on the guilty.

Promote public understanding of the securities markets.

To deliver high standards of investor protection by ensuring that the firms operating in the securities markets are:

fit and proper (honest, competent and with adequate resources to carry out the services they market to customers), employing individuals who are competent, capable, financially sound and who have integrity;

conduct their business with investors in accordance with good market practice;  
safeguard investors' assets;

have sufficient financial resources to meet their obligations;

Self regulation

A self regulatory system is organised and operated by the participants in a particular market without government intervention.

Incentives for self regulation include (a) is that it is an economic good which will benefit all participants and enhance the reputation of the market and (b) that the government will impose statutory regulation if the industry does not put in place a satisfactory system of self-regulation.

One of the advantages of self-regulation is that it is implemented by the people with the greatest market knowledge.

Self regulation ought to be able to respond more rapidly to changes in the market.

It may be easier to persuade securities firms to cooperate with a self regulatory organisation than with a government bureaucracy.

The main disadvantages of self regulation is the lack of separation of the industry from the regulator and the fact that the public may not have confidence in the system of regulation because of this feature.

Regulatory organisations may inhibit new entrants to the market particularly if they threaten the profitability of existing industry players.

### Statutory regulation

In statutory regulation the government makes the rules and polices them.

The main advantage is that such a system of regulation may command a higher degree of public confidence and be less open to abuse.

The main disadvantage with statutory regulation is that it can be more costly than self regulation and less flexible.

- (iii) Require senior managers to register following the passing of a competency test and a test as a “fit and proper” person.

Senior managers could be assigned individual responsibilities which they must formally acknowledge.

Senior managers would be held directly responsible for rule breaches in their allocated areas of responsibility which arise from management failure. A graded scale of sanctions would need to apply to offences.

Senior managers could be asked to list the risks facing the firm, develop a written policy statement by which those risk would be handled and demonstrate the robustness of the firms procedures for controlling the risks identified.

The prime responsibility for dealing fairly with customers could rest with senior management.

The regulator could set out clear standards for senior management to fulfil.

Introduce an appointed actuary type system for all firms with greater statutory powers for the actuary.

*Comment: This question was answered well.*