

Institute of Actuaries of India

INDICATIVE SOLUTION

November 2011 Examination

Subject SA2 – Life Insurance

Introduction

The indicative solution has been written by the Examiners with the aim of helping candidates. The solutions given are only indicative. It is realized that there could be other points as valid answers and examiner have given credit for any alternative approach or interpretation which they consider to be reasonable

Answer 1

(i)

The technique of Constant Proportion Portfolio Insurance effectively buys equities when their pricing is rising and conversely sells when their price is falling

This investment management technique uses an algorithm approach for the investment manager to invest the assets backing the product liabilities between equity and debt and could result in entire amounts being invested towards one of these asset classes. In the Indian context with a large retail distribution network employed by Companies to reach customers it is possible that the precise form of the guarantee or the investment operations are not explained appropriately leading to market conduct risk. This may lead to inappropriate expectations being created with policyholders e.g. highest value of equity index in the seven years being guaranteed.

Another risk associated with this product is the so called 'gap risk' that arises due to volatility of the asset values underlying the fund. One of the key events that may trigger a 'gap event' is the combined fall in equity market and reduction in interest rates.

This risk is linked with the level of aggressiveness adopted by the Company through the use of a 'multiplier'. The derivation of the multiplier has already been set out in the Question. A higher level of maximum fall in equities would lead to a lower multiple, and thus a lower allocation of assets to equities. If the realised delta is higher than that assumed through the multiplier, the amount of money available will be insufficient to honour the guarantee and a 'gap' arises.

The Company should consider the duration mismatch risk by comparing the asset duration with the liability duration. Investment in coupon paying bonds leads to reinvestment risk as future returns on coupons are unknown. Investment in corporate bonds will lead to credit risk.

Given the active investment management associated with the product, operational risk is significant. This relates to the systems associated with the CPPI algorithm. The process of regularly informing the front office to make changes on a daily basis to rebalance the portfolio also has risks associated with it. The product may involve a form of basis risk, in case the actual portfolio of equities is not the same as the index used to derive the equity basket. This may manifest in the delta being different from that assumed. The CPPI technique implies the product has a pro-cyclical nature i.e. it reinforces the prevailing conditions. This can lead to systemic risk at an aggregate level by exacerbating market movements through forced selling by all companies selling the product.

(ii)

Appropriate training for distributors involved in the sale of this product would be a significant mitigant given the market conduct risks inherent in the product.

This would include training in the requirement given to the investment manager to vary asset allocation between equities and debt and not to present the product as an equity product.

Marketing material should be carefully drafted to illustrate the exact nature of guarantee, its applicability conditions - only applicable at maturity etc. The material should clearly specify the investment philosophy adopted. Examples

should be used to illustrate that the product does not guarantee the highest value of the equity index for example.

The market risk can be mitigated by the use of a lower multiplier. The safest option would be to use a multiplier close to 1. For example a multiplier of 2 implies equity delta of up to 50% could be sustained without triggering a gap event.

Another way of mitigating market risk / gap risk is to invest in a portfolio of equities with volatility capped to a level.

The Company should aim to match the asset duration with the liability duration to mitigate the interest rate risk Operational risk requires strong processes to be set up to ensure the investment management process runs smoothly. Adequate back up of key personnel with knowledge of the processes would mitigate the people risk Additional internal controls could be deployed to monitor the process closely.

Audits could be carried out, including the use of external audits with specialised skills in this areas, would be advisable.

Systemic risk requires aggregate system level mitigants. At the Company level systemic risk can be reduced by capping the volume of business sold by the Company.

Another mitigant involves setting aside additional capital for systemic risk i e in times of increases in the equity markets additional amounts of capital may be set aside which could be drawn upon at defined events such as the occurrence of gap event

[13]

Q. 2 (i)

The analysis of surplus carried out for the FY2010/11 analyses the source of surplus for the Company's profits based on Statutory Accounting Principles prevalent in India

Analysis of surplus can be carried out various bases. For example, the Embedded Value movement could be analysed using similar techniques to identify the sources of EV profits. This is beyond the scope of the current analysis which focuses only on statutory profits

The Actual Profit arising can be split into two components, the Expected Profits and the Experience Profits.

The Expected Profits are the level of profits arising due to the release of Margins for Adverse Deviation attributable to the reporting period, in this instance FY2010/11

The MADs held in the valuation basis, are expected to contribute to Profits since they will not be needed i.e the actual experience is expected to be in line with the best estimate assumptions and not the prudent assumptions including the MADs

The Experience Profits are then a result of the variances between expected experience and

actual experience.

The impact of Experience Profits relates to their reporting period

The Experience Profit reflects the way the company has been managed in the reporting period of FY2010/11

Thus the Company profits attributable to the way the company has been managed in the reporting period are a loss of Rs5 Crore in the unit-linked line of business, and Rs10Crore loss in the Par line of business

The key sources of this Experience Profit are persistency (loss of Rs80 Cr) and costs (Rs60Cr)

New business is somewhat unique in its treatment under the Analysis of Surplus. There is no new business that can be carried forward from previous reporting periods ie the analysis is done on the basis that the opening valuation does not include any expectation of future new business. Thus, the writing of new business is attributable entirely to the Experience Profit.

As is well known, insurance is a long term contract and the writing of new business typically leads to a loss at the time of acquisition - known as new business strain.

This new business strain is caused by several factors including acquisition costs that are typically recovered over a longer period of time and the need to set up reserves and solvency margin.

Unit-linked business in India is typically more onerous than Par business in terms of new business strain One of the main reasons for this is that unit-linked business requires the setting up of mathematical reserves comprising of unit and non unit reserves. Each of these elements is required to be non negative, and therefore even profitable contracts cannot have negative non unit reserves. As a result the level of initial reserves is often close to, or equal to, the unit reserves.

Unlike unit-linked business, Par business initial reserves may be quite low, or even zero. This results in a different new business strain.

The analysis of surplus shows the impact of new business on structural costs, ie it ignores expense overruns. The different new business strain is evident with unit-linked business causing a strain of Rs20 Cr, whereas Par business contributed positively to the tune of Rs100 Cr.

The impact of costs, including expenses and commission is shown separately. The level of commissions by line of business are directly attributable to the amount of business and commission rates for unit-linked and Par business.

Expenses are typically allocated by line of business using allocation methodology that reflects the cost structure of the Company; the level and type of business written by product line.

Since Par business contributed to 60% of the new business in FY2010/11 it is natural to expect a greater level of expenses would be allocated to the Par line of business

Since the analysis of surplus attributes expense overruns to the Cost line, the acquisition expense overruns would depress the Experience Profits.

In line with the treatment of new business, the acquisition expense overrun does not have any contribution from Expected Profits. A greater proportion of the acquisition expense overrun would therefore explain the negative Experience Cost for Par business.

For unit-linked business, there may be a maintenance underrun for Experience - relative to the valuation maintenance expenses including MADs. A higher level of this underrun relative to the acquisition expense overrun allocated to unit-linked business would lead to a positive Cost Experience

The impact of persistency on the analysis of surplus is typically complex.

This complexity arises due to several factors such as the level of surrender charges varying by duration, the level of persistency by duration, the impact of related phenomenon such as revivals, paid-up

For unit-linked business, the impact of revivals may vary depending on the precise policy conditions for lapse and revival. However, at the time of revival there may be a strain due to the fund value being restored. There may be a reversal of surrender charges at the time of revival also

Thus revival may be viewed as another type of 'new business' along with an associated strain which may lead to negative Experience Persistency. Thus, a higher level of persistency compared to the valuation assumption caused by revivals can cause a negative short term impact as analysed through Statutory Surplus

Higher persistency compared to the valuation experience for Par business may result in Statutory Profits due to lapse supported business. The lapse profits in Statutory Profits arises due to the difference between the release of reserves and surrender value paid out

One of the shortcomings of analysing surplus on Statutory Profits relates to the short time period over which the effects of various elements are analysed. The overall impact on Value of Persistency would be better explained through a similar analysis on the EV Movement. Such an analysis would take into account the impact of revivals on increased future charges and its impact on the Value of In Force / EV.

One would expect that the aggregate impact of higher revival may be negative on Statutory Surplus and thus Net Worth but positive on EV

(ii)

Benefit illustrations for Par business are an integral part of the product pricing

The development of Benefit Illustrations would need to bear considerations arising out of:

GN5 on Benefit Illustrations

Life Insurance Council circular of Feb 2004

GN5 in particular requires the use of appropriate assumptions to project non guaranteed benefits based on past experience where available and the Appointed Actuary's view of the assumptions in the future.

GN5 requires any difference in assumptions from those used in the File and Use to be justified by the Appointed Actuary.

The use of structural cost assumptions will create expectations amongst policyholders that the acquisition expense overrun will not be allocated to the Policyholders

This may be considered acceptable if there is agreement to charge the acquisition expense overrun to the Shareholders. However, if this is not agreed, it would be inappropriate to use structural costs in illustrating bonus rates but then charging current costs to the Policyholders' Fund, thereby depressing bonuses.

With respect to investment returns, the Appointed Actuary should ensure the bonus rates are consistent with the assumed rates of 6% and 10%.

The Appointed Actuary should inform the Sales Director that illustrations should not be used to gain a competitive advantage in the market

The Appointed Actuary needs to consider PRE created by the illustrations. In particular the use of structural costs implies that the level of bonuses used in reserving must be consistent with this level of cost. Therefore, irrespective of the treatment of acquisition expense overrun, the level of reserves would increase due to the higher level of bonuses used. Charging the asset shares then with a higher level of expenses would depress surplus.

(iii)

Current Indian regime relies significantly on the Appointed Actuary to ensure customers are treated fairly in so far as the distribution of financial outcomes is concerned

This is covered by the Appointed Actuary certificate required for each product covering the words:

"..in my opinion, the premium rates, advantages, terms and conditions of the product...are workable and sound, the assumptions are reasonable and premium rates are fair"

Thus the Statutory regime exists in India for the AA to certify products are inherently fair and the IRDA verifies this by according its approval

Best practice evolving in this area is to have corporate governance arrangements to set out policies that address the fair treatment of customers

The IRDA requires such corporate governance arrangements to be followed by a Board Committee - the Policyholder Protection Committee it has mandated

In relation to the fair treatment of customers there are several product related aspects that

need to be considered, including financial outcomes, comprehensibility, consistency of delivered outcomes, point of sale representation

The policies should cover the three key stakeholders customer, distributor and the insurer. An equitable and fair treatment of all the stakeholders should be a stated aim for the policy

In order to consider the equitable distribution of financial outcomes one approach would be to consider the sources of surplus and to achieve clarity over which sources of surplus/deficit would be shared with the policyholders

A fair treatment of policyholders could set out principles such as the symmetric treatment of policyholders with respect to sharing of surplus. For example, in relation to expense surplus this could entail sharing both expense overruns and underruns

The policies could have reference to asset shares and how the accretions to, and deductions from, the asset share would be done. With respect to expenses charged to the asset share the Company should ensure these are consistent with the assumptions underlying the Benefit Illustrations

In the Indian context, Insurance Rule 17D provides a maximum level allowed by law and hence this clearly needs to be adhered to Commission levels in the products should have regard to the nature, type and term of the policy being designed. It should consider factors such as premium and policy term, level of insurance protection

Policyholders would expect mortality and morbidity levels to be managed through the underwriting process of the insurer ie policyholders would expect these to be managed such that the cost of insurance levied is fair. This would imply the levels of mortality/ morbidity being consistent with the risk profile of the policyholders taking into account socio economic class, occupation and geographical location

The Company may want to set some boundary conditions around the profit margin element within the premium utilisation.

Since the fairness is being addressed for Participating product, these margins contribute to the financial strength of the Par Fund Such contributions should be deemed fair, taking into account the support given by the Par Fund to new business.

The amount transferred to shareholders is directly linked to the amount distributed to policyholders limited to one ninth of the surplus distributed to the policyholders each year.

As the level of distribution to shareholders is defined by Par Fund legislation in India this may be deemed inherently fair.

(iv)

Liquidity risk is defined as the risk that a Company does not have sufficient financial resources available to meet its obligations as they fall due.

It also includes the risk that the financial resources can only be made available at excessive costs

Liquidity risk does not imply the Company is insolvent but that its liquid assets are less than its liquid liabilities

(v)

The liquidity swap transaction described by the Director would reduce the amount of liquid assets for the company

This would increase the Company's liquidity risk

In addition, the Company's yield on assets should improve. This is based on the expectation that the Company will trade more liquid assets such as govt bonds away with less liquid, but higher yielding assets, such as mortgage-linked assets. Apart from the changes to liquidity risk profile, the Company's credit risk profile will also change.

Trading govt bonds with mortgage-linked assets will increase the level of credit risk as the higher yielding assets are likely to be non sovereign bonds.

Another form of credit risk related to this transaction would be the counterparty risk of dealing with the bank.

The level of this counter party credit risk would depend on the bank's credit rating, and its rating outlook. It would be relevant to look at the duration swap that results from this transaction

In case the duration of the mortgage-linked assets/ other assets swapped are shorter or longer than the current govt bonds held by the Company, it would be relevant to consider the ALM impact.

Given that this transaction may be a new one for the Company, it is likely to also lead to an increase in the operational risk. Specific elements of the operational risk would include the legal documents covering the transaction, any new processes set up to enable this transaction, people risk

[37]

Q. 3 (i)

IRDA (Appointed Actuary) Regulations

IRDA (Actuarial Abstract and Report) Regulations

Other circular issued from IRDA relating to Appointed Actuary's annual report

IRDA (Preparation of Financial Statements and Auditors Report of Insurance Companies) regulations 2002

IRDA (Protection of Policyholder's Interest) Regulations 2002

IRDA (Protection of Policyholder's Interest) (Amendment) Regulations 2002

IRDA (Assets Liability and Solvency Margin of Insurers) regulations 2000

Insurance act, 1938 as amended from time to time
 IRDA (Distribution of Surplus) regulations 2002
 IRDA Circulars on Unit Linked Products
 IRDA Circulars on benefit Illustrations for Unit Linked products regarding disclosure of charges and customized illustrations
 APS 1: Appointed Actuary and Life Insurance Business
 APS2: Additional guidance for appointed actuaries and other actuaries involved in Life Insurance
 APS3: Financial Condition Report
 APS4: Peer Review and Appointed Actuary in Life Insurance
 APS5: Appointed Actuary and Principles of Life insurance Policy illustrations
 APS7: Appointed Actuary (AA) and principles of determining Margins for Adverse Deviations

(ii)

IRDA (Assets Liability and Solvency Margin of insurers) regulations 2000:

Valuation of Assets:

1. Following assets to have zero value:

Agent's balance and o/s premiums in India, to the extent they are not realizable in 30 days

Agents balance and o/s premium outside India to the extent they are not realizable

Sundry debts to extent they are not realizable

Any advances of unrealistic character

Furniture/fixtures/dead stocks and stationary

Deferred expenses

P&L account and any fictitious assets apart from pre paid expenses

Reinsurer's balance o/s for more than 3 months

Preliminary expenses incurred in formation of the company

2. Value of computer equipments including software to be calculated as 70%/50%/25%/0% of the original value for the year 1 to 4 respectively.

All other assets to be values as per IRDA (Preparation of Financial Statement and auditors Report of Insurance Companies) regulations, 2000

Section 7 of the above regulations provides for the procedure to determine the value of investments:

i. Real Estate – Investment property:

- At historical cost, subject to revaluation at least once in every three years.
- The change in the carrying amount of the investment property shall be taken to Revaluation Reserve.
- Impairment – expensed immediately

ii. Debt Securities

- Debt securities, including government securities and redeemable preference shares, shall be considered as “held to maturity” securities and
- shall be measured at historical cost subject to amortisation.

iii. Equity Securities and Derivative Instruments that are traded in active markets

- Listed equity securities and derivative instruments that are traded in active

markets shall be measured at fair value on the balance sheet date.

- For the purpose of calculation of fair value, the lowest of the last quoted closing price at the stock exchanges where the securities are listed shall be taken. Company are required to maintain the fair value change account resulting into equities effectively being valued at the lower of book value and market value.
- any impairment is expensed immediately.

iv. Unlisted and other than actively traded Equity Securities and Derivative Instruments

- Unlisted equity securities and derivative instruments and listed equity securities and derivative instruments that are not regularly traded in active markets shall be measured at historical cost.
- Provision shall be made for diminution in value of such investments. The provision so made shall be reversed in subsequent periods if estimates based on external evidence show an increase in the value of the investment over its carrying amount.
- The increased carrying amount of the investment due to the reversal of the provision shall not exceed the historical cost.

v. Loans

- Loans shall be measured at historical cost subject to impairment provisions.
- The insurer shall assess the quality of its loan assets and shall provide for impairment.
- The impairment provision shall not be less than the aggregate amount of loans which are subject to defaults of the nature mentioned below:-
- Interest remaining unpaid for over a period of six months; and installment(s) of loan falling due and remaining unpaid during the last six months.

(iii)

Given that the close matching of Assets and Liabilities is done reduction in interest rates, especially in the long term, has implications for the statutory valuation basis.

ALSM Regulations, Schedule IIA, section 5 (5) require a 'prudent assessment of the yields from existing assets' which would be based on book yield. But also require consideration of the 'likely future investment conditions and the reinvestment and disinvestment strategy' which, in the absence of cash flow matching, would likely to be based on market yields.

If Govt. bond yields fall, the yield on other fixed interest securities is also likely to fall.

The spread between these assets and Govt. bonds may also change due to relative demand for these assets and the reason for the fall in the yields.

The current liability valuation basis would be less than the actual yield due to dampening effect on valuation rate of MAD being related to 10-year G-Sec yield as required by the APS7.

Subclause 5(4) of the Schedule IIA of ASLM regulations require that all expenses should be increased with future years of inflation and that the rate of inflation shall be consistent with the valuation rate of interest. The margin for adverse deviation (MAD) should be in the difference between the valuation interest rate and the inflation. The inflation used to inflate the expenses may have to be reviewed and possible downward adjustment impacting the value of liability.

(a) Term Insurance:

- has guaranteed benefits; backed by fixed investments;
- sensitivity depends on RP/SP and duration of the contracts in portfolio. Given lower reserves for RP business, the effect may not be material.
- due to fall in yields, the discount rates may have to be decreased - reserves will increase
- however, as A & L are matched and bonds are valued at amortised value in India and not at market values, the impact should not be significant.

(b) Unit linked Life and Pension plans

- Unit linked reserves consists of (i) unit reserve (ii) any non-unit reserve in respect of other benefits in particular future expense reserves and zeroisation of any future negative cash flows.

Impact on unit reserve –

- depends on where the units are invested; if in bonds, the bond values would have appreciated;
- if in equities, perhaps they are also increased, due to low yields, especially when the reduction in interest rates is expected to continue. Overall the unit liabilities are expected to increase. However, given A & L are matched, no impact on the surplus.

Impact on non-unit reserve:

- The fall in interest rates would lead to a fall in the valuation rate. All other factors being equal, this would lead to a rise in the reserve. The effect on surplus would depend on the extent to which non-unit reserves are matched.
- The fund related charges would increase in value due to increase in the value of assets.
- The impact also depend on the amount of zeroisation of negative reserves; if there is significant zeroisation happening at the policy level, there will be insignificant change in the reserves,
- Sensitivity of the change in the Fund earning rate and valuation interest rate will be different for different product depending upon the product features like ;
 - i. the duration of policy at the valuation date;
 - ii. Product Features, e.g. nos of year o/s for any persistency bonus
 - iii. any foreclosure conditions ; due to lower FER some of the policies may get foreclosed and would lead to release of reserves.
- however the value of assets will increase
- Nevertheless, its not possible to make any firm inference of the direction of movement in non-unit reserves

(c) With profit Life and Pensions:

- valued using gross premium method;
- Pension most probably funded for cash at retirement;
- long term nature of the contract means sharp increase in the liabilities ; as usually assets have a lower mean term, increase in asset values would be less thus leading to a strain. However, if the reserving strategy is to equate the reserves to asset share by solving for future bonuses, there should be no strain.

However, due to the impact of MAD on valuation interest rate, the fall in the valuation interest rate will be less than the fall in the 10 Year G sec Yield.

- The co. could however be holding some extra reserves for the cost of guarantee in respect of maturity benefits. Additional reserves may be required which could be calculated using stochastic methods.

Cost of certain options like Guaranteed Insurability Options depends upon companies policies on the level of terminal bonus cushion and how they manage equity among the policyholders of various generations.

- In the with-profits contract, the increase in the value of assets to some extent would reduce the additional reserves
- There would of course be some benefit due to the return on the additional reserves kept due to lowering of Yield.

(iv)

The starting point would be experience investigations into

- o investment returns,
- o expenses, mortality and morbidity,
- o lapses and
- o product mix.

- The company has been in operation for quite some time and should have its own credible experience, where the experience is not credible, industry experience, where available, can be used.

- For new products, where no relevant experience exists premium basis can be used.
- The primary factor in setting the RB is expected long term investment return that the company may be able to achieve.
- The major considerations that co will have in setting the reversionary bonus is that they are SUPPORTABLE based on REALISTIC set of assumptions concerning future experience.
- Need to establish applicable tax rates and shareholders' entitlements to surplus.
- Co needs to look for the projected asset share to be sufficient to cover the projected benefit and also maintain what it considers to be appropriate CUSHION for TERMINAL Bonus. Greater the Proportion of reversionary bonus, the greater is the risk and hence higher COST of guarantee.
- Bonus earning capacity of each product line must be established. The bonus earning capacity should also consider different model points (age, term, duration, and

policy size) to verify that a single bonus rate (or at least a simple scale of bonus rates) is broadly equitable for all classes and cohorts.

- This bonus earning capacity is established by comparing projections of the bonus reserve valuation with the asset shares. The current solvency position after the cost of new bonus must be established.
- Model office projections of future solvency, free assets and investment earnings (including capital appreciation on equities) to establish
 - i. sustainability of reversionary bonus rates
 - ii assess impact of smoothing
 - iii. sensitivity to asset value fluctuations, free assets and investment freedom, and future capital requirements.
- PRE which has been established by benefit illustrations, marketing literature, policy documents and historical bonus declaration.
- Impact of benefit illustrations on bonus rates to be declared . Further, findings and uses of bonus-related investigations should influence new business benefit illustrations.
- Co has been in operation for over 10 years, as per IRDA guidelines, it is NOT easy to fund possible deficit in the Par fund; co need to ensure it has sufficient estate to support the risk profile of the existing business and is not dependent on transfer from shareholder
- Competitive considerations, what are competitors doing and how do our benefit illustrations compare using the declared bonus rates.

(v)

Underperforming of the share price of shareholding company:

The share price of the insurer's parent company is not a consideration for determining the bonus to be declared to the policyholder.

- Earnings to parent company will come in the form of dividend from surplus emerging from profit on non-participating business and shareholders' share of profit on existing and new par business.
- Increase in RB rate will lead lower scope for the Terminal Bonus; however it increase the shareholder's transfer; this is presumably what the director is focusing on.
- In short term higher RB will please policyholders who see their guaranteed benefit increasing and possibly the NB will also increase enhancing the value of the shareholder's value.
- However, changing the emphasis from Terminal to regular bonus would mean
 - o Higher guaranteed benefit and hence lower investment freedom
 - o Higher cost of guarantee and hence co may have to reduce Equity Backing ratio (EBR), in turn reducing the return on par assets.
- Lower future returns would reduce the supportable bonus and hence future bonus would have to be lowered. This change may be against the PRE and may result into surrenders and lower new business volume.
- When declaring bonus rates, appointed actuary already considers
 - o Sustainability
 - o PRE and
 - o Long term impact of recommendations

Cutting bonus rates is justified by the investigations.

(vi)

- It is important to consider the impact of changes in the investment conditions; company's assets and liabilities are closely matched, however, depending on the EBR the company's solvency position may get weakened.
- The significance of stock market crash would depend upon % invested in Equity (EBR) and tracking error between holdings and market index.
- The actuary should have already investigated the sustainability of future bonus rates if market were to crash
- The RB is determined with regards to the income expected on the funds backing the Par business; any sudden fall is likely to be reflected in the reduced terminal bonus payment; depending on the smoothing policy of the company.

Most companies would include some allowance for capital gains, realised or unrealised, in their RB also. The balance between RB and TB is more likely to be dictated by PRE and by CoG considerations.

• **If the market falls and dividend level falls correspondingly:**

We have same yield on the new money

However, the future income on the existing assets backing the liabilities will reduce

So there is justification for lower supportable bonus on existing business along with unchanged bonus rates supportable on New Business and on future premiums.

• **If the market were to fall without dividend level reducing then Yield will go up;**

so the return on new money will be higher than before. So the regular bonus could be reviewed (increased) at a subsequent valuation date.

- Fall in equity would mean the policies near maturity receive more than asset share. A cut in TB may be required to bring the Maturity value in line with Asset Share. The extent and the timing of cut will depend upon the smoothing policy of the company.

The amount of free assets may limit the scope of smoothing.

[50]
