SURVEY ON WITH PROFITS METHODOLOGY IN INDIA

13th CILA SEMINAR

26th MARCH 2018

BIKASH CHOUDHARY

APPOINTED ACTUARY AND CHIEF RISK OFFICER

FUTURE GENERALI LIFE

Institute of Actuaries of India

BACKGROUND

In the year 2017, a survey was conducted by IAI among Appointed Actuaries to understand the areas where AGLI can support the AAs through conducting surveys or producing concept papers or GNs/APS.

As part of this survey one of the requirements from majority of AAs was to conduct a survey on practices related Management of With-profits business.

Hence a survey on this topic was rolled out to get an industry view on different ways to manage the With Profit or Participating business and to identify areas where IAI could come out with appropriate Guidance, if any.

OBJECTIVE

In order to get a holistic view of the management of the participating business the survey was segregated into different sections such as:

1. Asset Share – 18 questions
2. Reserves – 3 questions
3. Bonuses – 12 questions
4. With-Profits Fund – 7 questions

DISCLAIMER

- THE PURPOSE OF THE SURVEY WAS NOT TO DEFINE ANY PARTICULAR CORRECT OR INCORRECT METHODOLOGY/PRACTICE OR TO GUIDE ANY COMPANY OR PERSONNEL, BUT TO SHARE PERSPECTIVES ON OVERALL MANAGEMENT OF WITH-PROFITS FUND.

- THE SURVEY AND ITS RELATED QUESTIONS ARE INTENDED FOR SEMINAR PURPOSE ONLY

- THE VIEWS EXPRESSED HERE ARE IN CAPACITY OF THE PERSON AND DOES NOT NECESSARILY REPRESENT VIEWS OF THE COMPANY AND/OR THE EMPLOYER

RESPONDENTS

- SURVEY SENT TO APPOINTED ACTUARIES OF 24 LIFE INSURANCE COMPANIES.

- 18 LIFE COMPANIES RESPONDED

EXECUTIVE SUMMARY

PART 1 – ASSET SHARE

- ✓ The general consensus is to **calculate asset share** at a **policy level** using **modelling software** such as Prophet etc.
- ✓ Majority of life insurers **group asset share** at a **product level** to determine Bonus Earning Capacity (BEC)
- ✓ Most insurers use **actual claim benefit payments** to determine asset share
- ✓ A significant number of insurers **do not share surrender profits/losses** with the policyholders through asset share workings. Amongst those who share these profits/losses, the majority shares them only partially.
- ✓ A large majority of insurers **do not maintain a smoothening account balance**
- ✓ Most of the life insurers **agree to deduct tax (at a policy level) on cost of bonus** from asset share even if the Company has **not reached breakeven**
- ✓ Asset share is **not calculated for riders** by most insurers
- ✓ A significant number of insurers **maintain a formal document** detailing principles and practices of managing with profits business

EXECUTIVE SUMMARY

PART 1 – ASSET SHARE

- ✓ Although the majority uses **TWRR with realised gains** to **accumulate earned asset share**, a number of life insurers use **TWRR with unrealised gains** as well as other proxies such as **Portfolio Yield** and **MWRR (with and without unrealised gains)**

- ✓ Several insurers use **Pricing Acquisition Expenses** and **Best Estimate Renewal Expenses** when calculating Asset Share. However, many also uses a combination of BI, Best Estimate, Pricing or Actual Expenses. However, significant number of insurers use pricing expenses.

- ✓ About 50% of insurers **do not deduct cost of capital** from asset share while majority others **deduct cost of capital based on solvency capital**

EXECUTIVE SUMMARY

PART 2 – RESERVES

- ✓ A significant number of insurers check the **statutory reserves against the asset share**
- ✓ Although a large number of insurers **check reserves against asset share at a product level**, several insurers check these numbers at an **overall level** instead
- ✓ Majority of life insurers use the **bonus rates in line with their valuation rate of interest for reserving**

EXECUTIVE SUMMARY

PART 3 – BONUSES

- ✓ Insurers are generally declaring regular bonuses as **additions to benefits defined as simple bonuses** i.e. applied on sum assured only

- ✓ Mostly insurers **share mortality and savings profits/losses** with participating policyholders. However, **not all of them share these profits/losses as part of regular bonuses**

- ✓ **Any undistributed surpluses after declaring regular bonuses are distributed as terminal bonus** by most insurers

- ✓ Majority insurers consider the following when declaring bonus:
  - ❖ Bonus Earning Capacity
  - ❖ Benefit Illustrations
  - ❖ Past Declarations

- ✓ Most insurers **declare regular bonuses as per Benefit Illustrations** and any undistributed surplus is declared as **terminal bonus. Terminal bonuses are generally declared on sum assured**

EXECUTIVE SUMMARY

PART 3 – BONUSES

- ✓ Many insurers **compare maturity value with asset share projection** to determine regular bonus rates. Several others compare **best estimate liability with asset share** or **target 80% - 110% of asset share pay-out against maturity value**

- ✓ **Terminal bonus** is **declared on death and maturity** by a large number of insurers. Some also declare terminal bonuses on **Surrender Values**

- ✓ Insurers vary terminal bonus rates by:
  - ❖ Product
  - ❖ Duration-In-Force
  - ❖ Policy Term
  - ❖ Premium Payment Term

EXECUTIVE SUMMARY

PART 4 – WITH PROFITS FUND

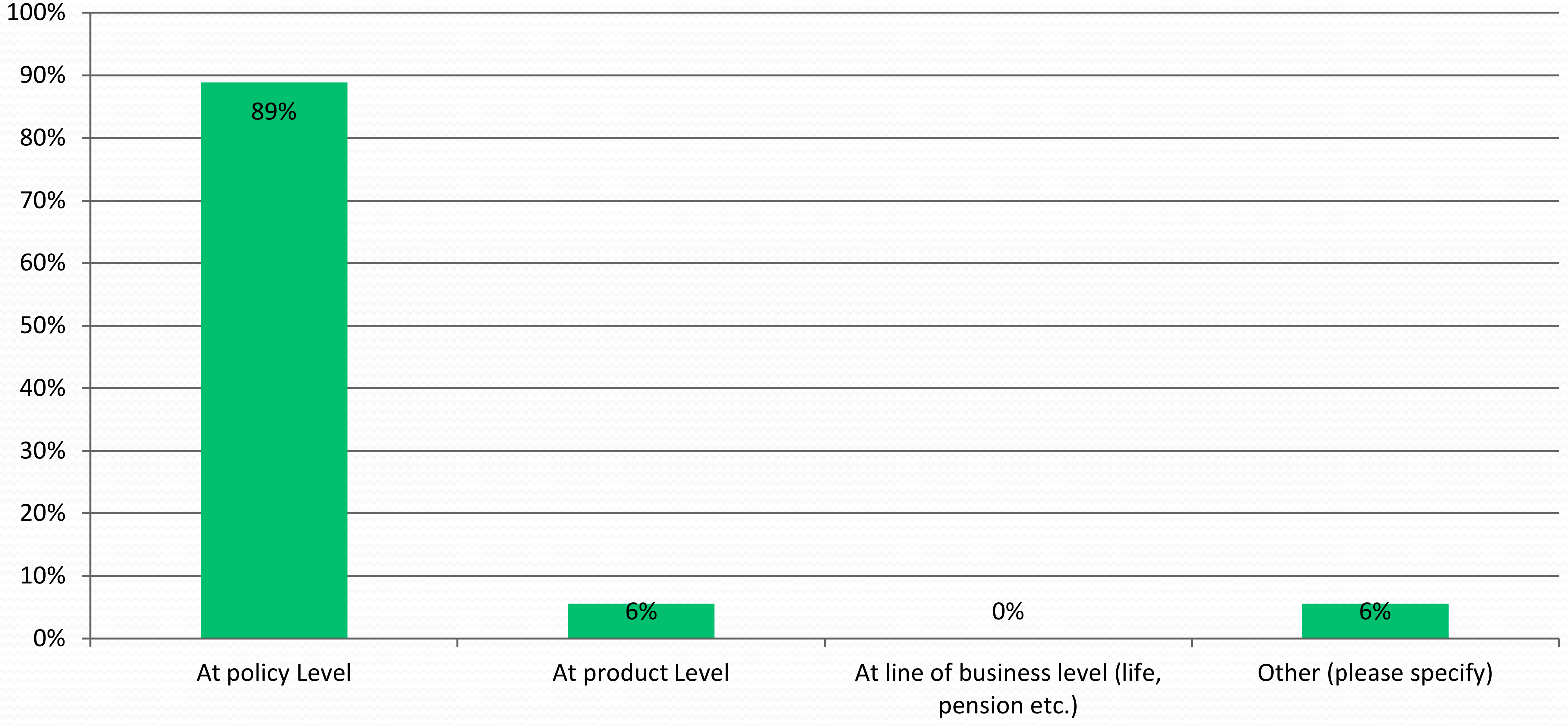
- ✓ A majority of life insurers **match assets and liabilities** in the participating fund using the **locked liabilities and FFA of the previous month along with premium net of expenses and claims received during the month**
- ✓ The general consensus is to **match assets and liabilities** either **monthly** or **quarterly**
- ✓ Most insurers use a **balanced approach** when defining the investment strategy of their participating portfolio.
- ✓ All insurers have at least 65% of their assets invested in government and corporate bonds (as per regulations) with most insurers having more than 80% exposure in bonds. Equity exposure is generally ranging between 2% to 10%.
- ✓ The duration of the participating portfolio is monitored against the **best estimate duration of existing business**
- ✓ Most insurers have an **asset duration** ranging between **7 to 9 years**
- ✓ Most insurers have a **liability duration** ranging between **8 to 12 years**
- ✓ The **liability duration exceeds asset duration** by **0 to 4 years** for most insurers

PART 1
ASSET SHARE

1. At what level is asset share calculated in your company?

A. At policy Level
B. At product Level
C. At line of business level (life, pension etc.)
D. Others (please specify)

1. At what level is asset share calculated in your company?



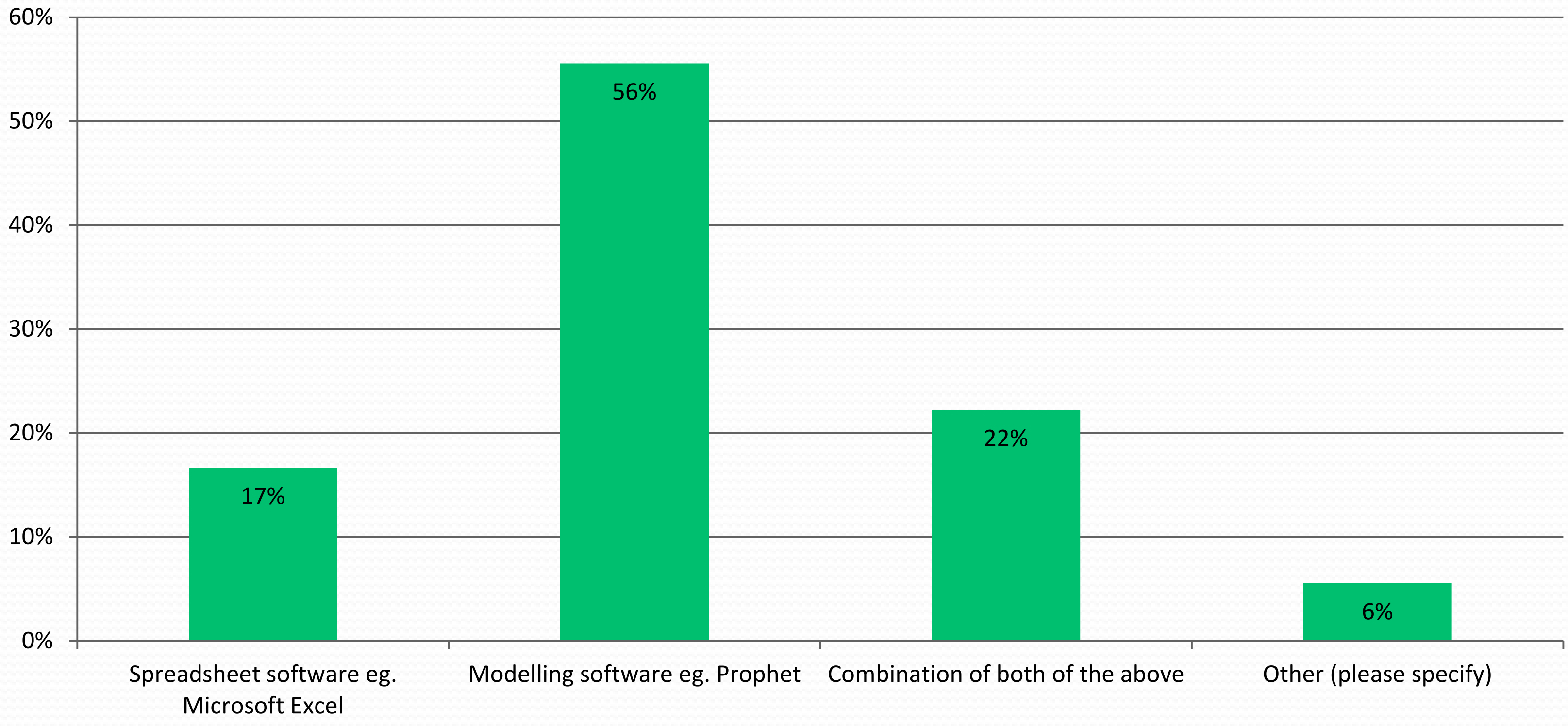
Others:

1. *At various cohort level of similar characteristics (grouping generally will be finer than product level)*

2. What software is used to calculate asset share?

A. Spreadsheet software e.g.. Microsoft Excel
B. Modelling software e.g.. Prophet
C. Combination of both of the above
D. Others (please specify)

2. What software is used to calculate asset share?



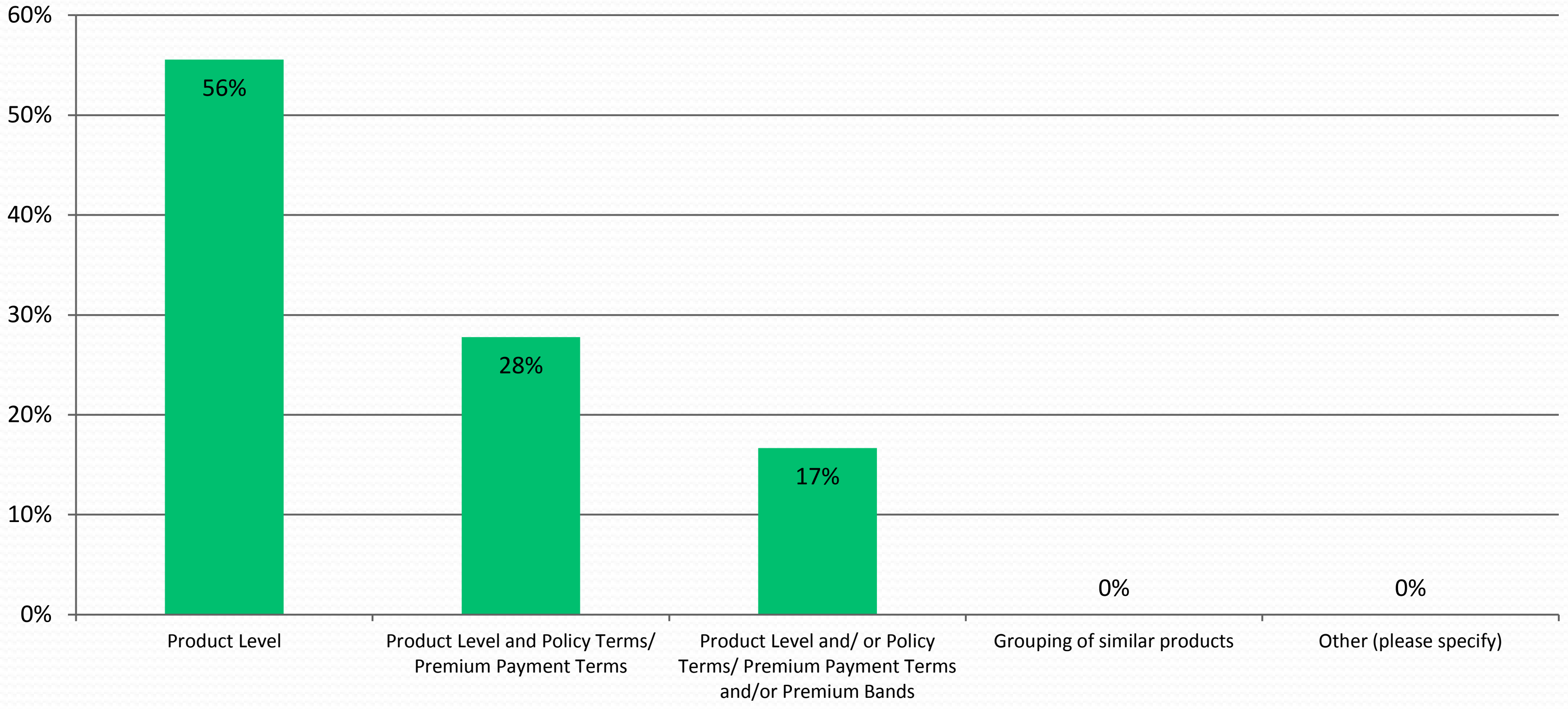
Others:

1. *Policy Admin System*

3. At what level is asset share grouped to determine the Bonus Earning Capacity (BEC)?

A. Product Level
B. Product Level and Policy Terms/ Premium Payment Terms
C. Product Level and/ or Policy Terms/ Premium Payment Terms and/or Premium Bands
D. Grouping of similar products
E. Others (please specify)

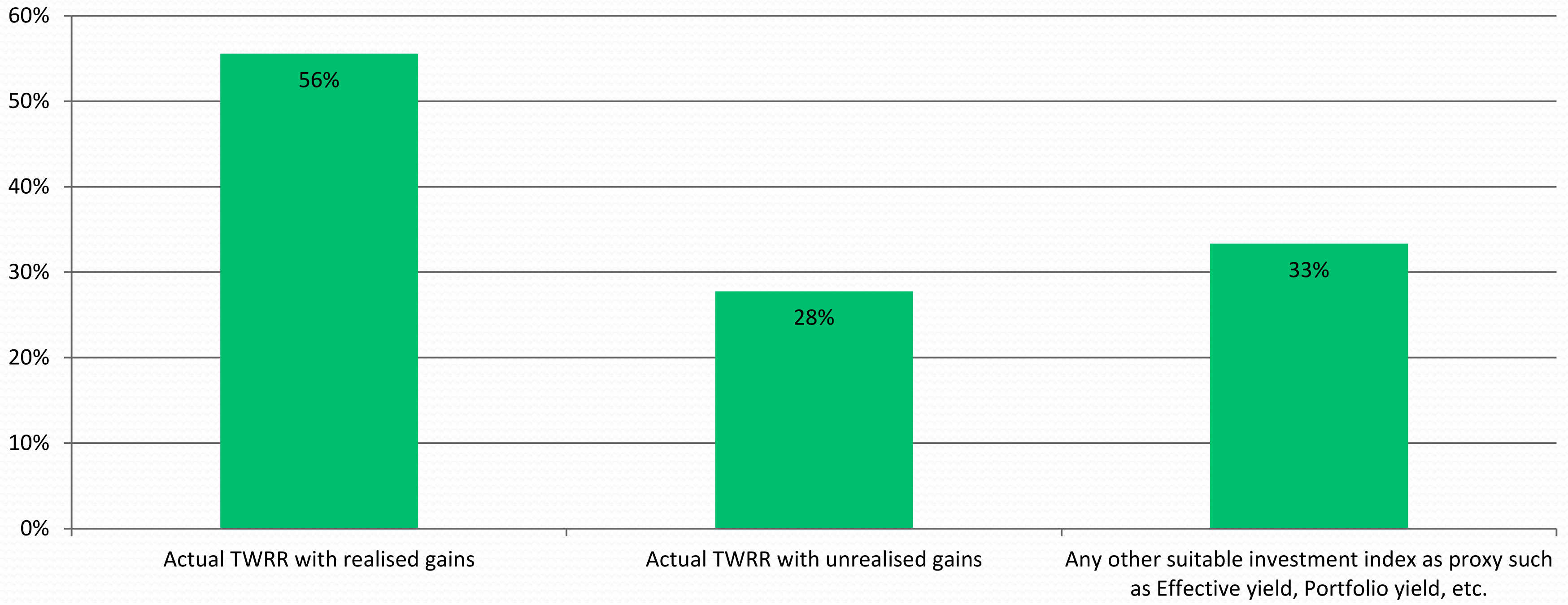
3. At what level is asset share grouped to determine the Bonus Earning Capacity (BEC)?



4. What investment return assumption is used to accumulate earned asset share while calculating BEC?

A. Actual TWRR with realised gains
B. Actual TWRR with unrealised gains
C. Any other suitable investment index as proxy such as Effective yield, portfolio yield etc. please specify

4. What investment return assumption is used to accumulate earned asset share while calculating BEC?



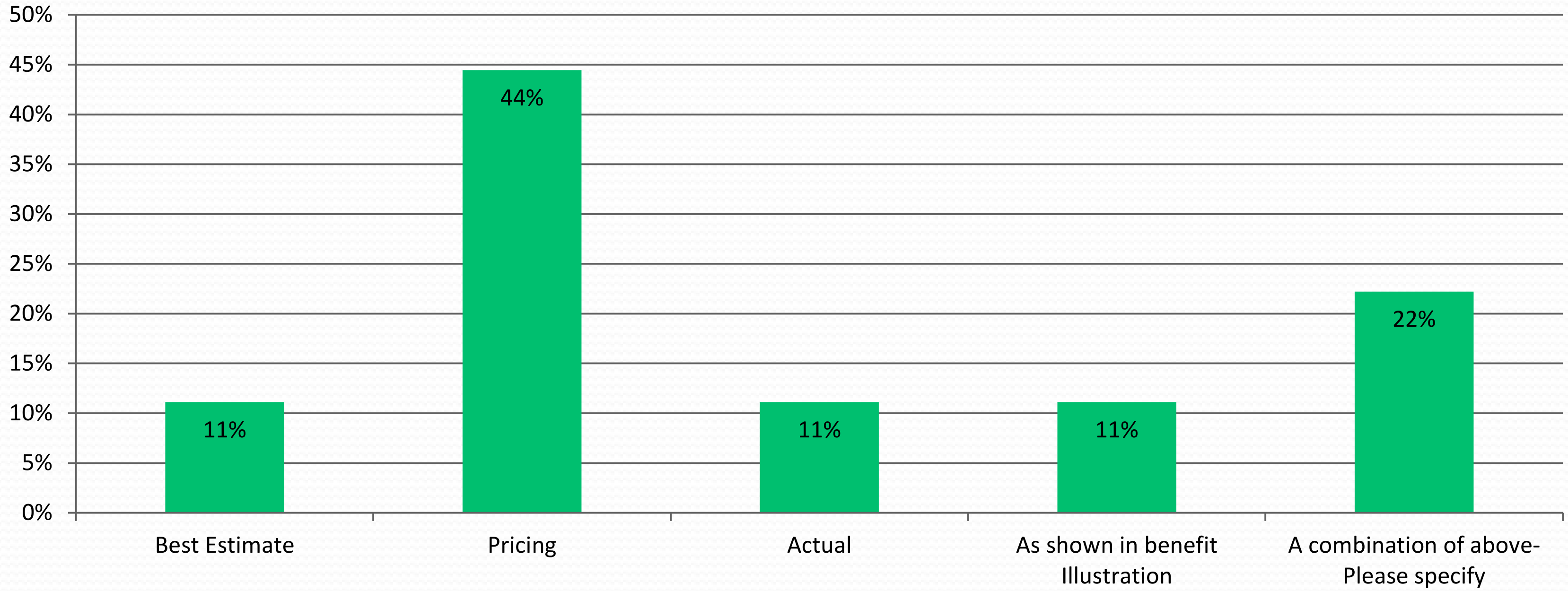
Others:

1. *Portfolio Yield*
2. *MWRR with realized gains and with unrealized gains*

5. Which acquisition expense is used to determine asset share which is used to determine BEC?

A. Best Estimate
B. Pricing
C. Actual
D. As shown in benefit Illustration
E. A combination of above – please specify
F. Others (please specify)

5. Which acquisition expense is used to determine asset share which is used to determine BEC?



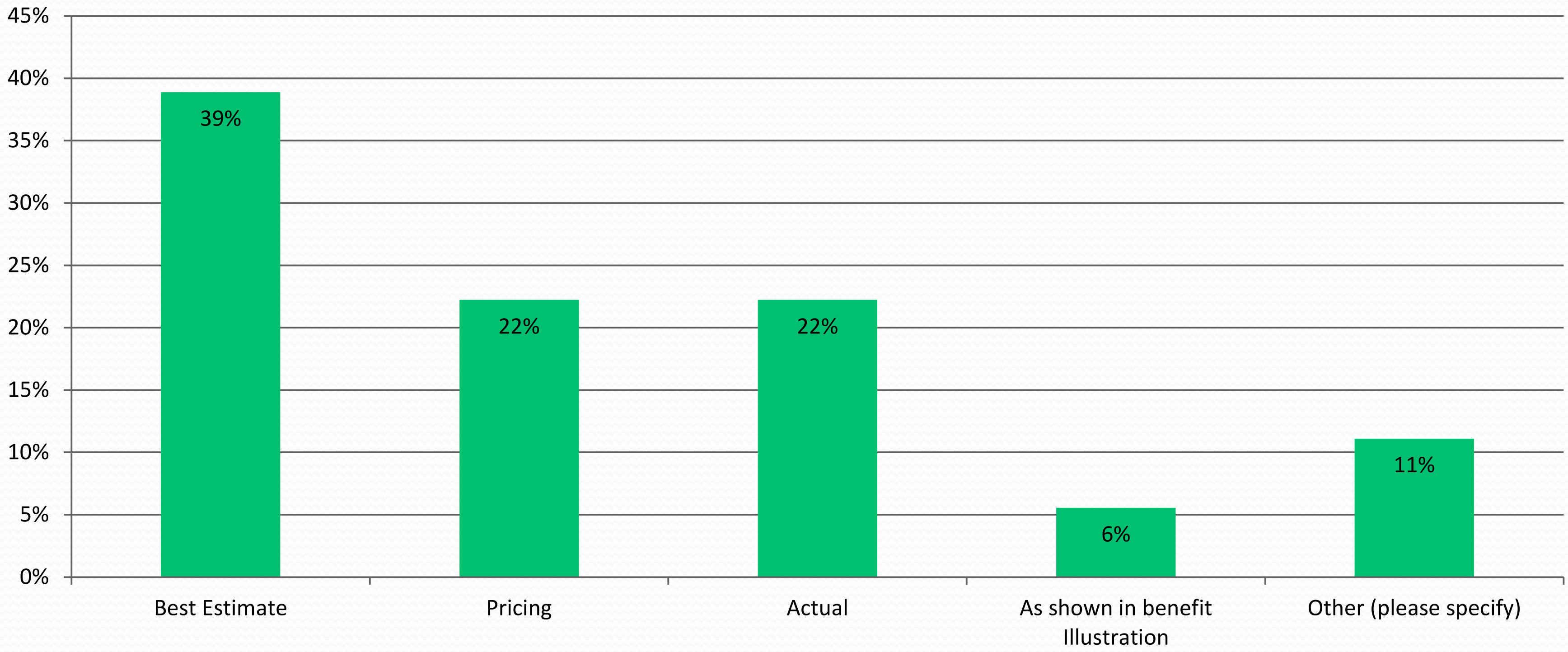
Others:

1. *New Products – BI; Old Products – Profit Testing*
2. *New Products – Pricing; Existing Products – Actual*
3. *Pricing expenses till the company is under overrun phase. After that the actual expenses should be taken.*
4. *Combination of BI, Best Estimate and Pricing expenses*

6. Which renewal (maintenance) expenses are used to determine asset share which is used to determine BEC?

A. Best Estimate
B. Pricing
C. Actual
D. As shown in Benefit Illustration
E. Others (please specify)

6. Which renewal (maintenance) expenses are used to determine asset share which is used to determine BEC?



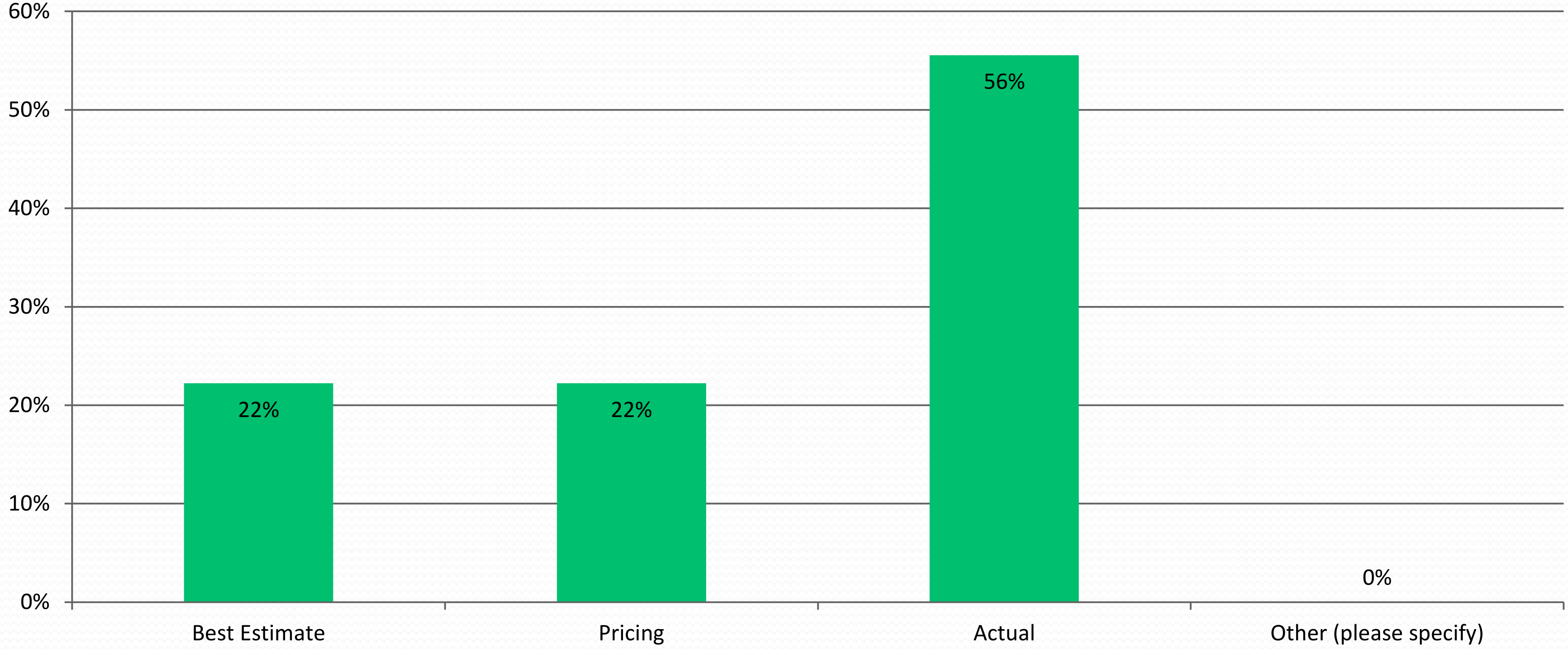
Others:

1. *Pricing expenses till the company is under overrun phase. After that the actual expenses should be taken*
2. *Combination of BI and Pricing Expenses*

7. Which claim benefit payments are used to determine asset share?

A. Best Estimate
B. Pricing
C. Actual
D. Others (please specify)

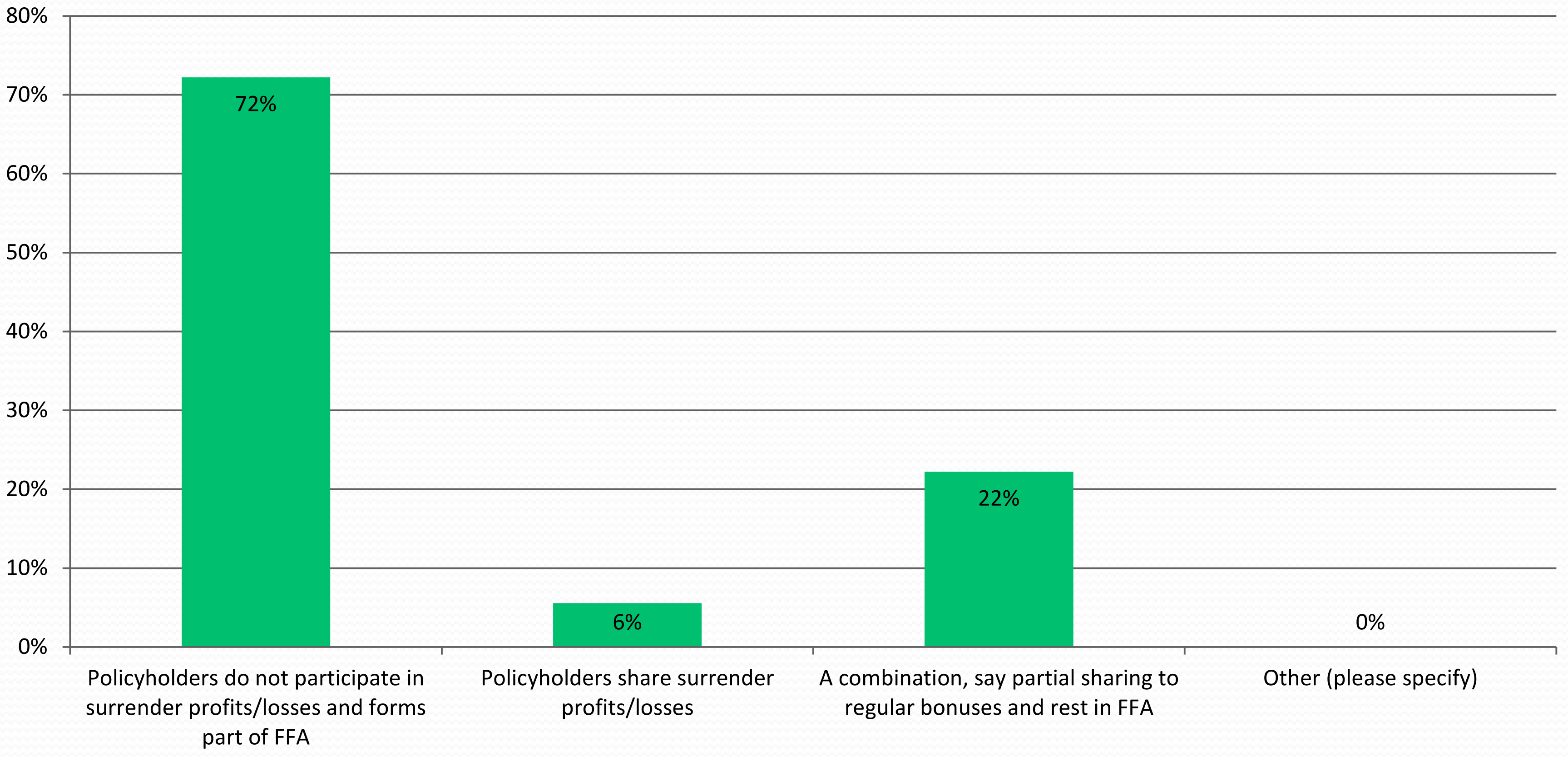
7. Which claim benefit payments are used to determine asset share?



8. How do you account for lapse/ surrender/ paid up profits/losses earned?

A. Policyholders do not participate in surrender profits/losses and forms part of FFA
B. Policyholders share surrender profits/losses
C. A combination, say partial sharing to regular bonuses and rest in FFA
D. Others (please specify)

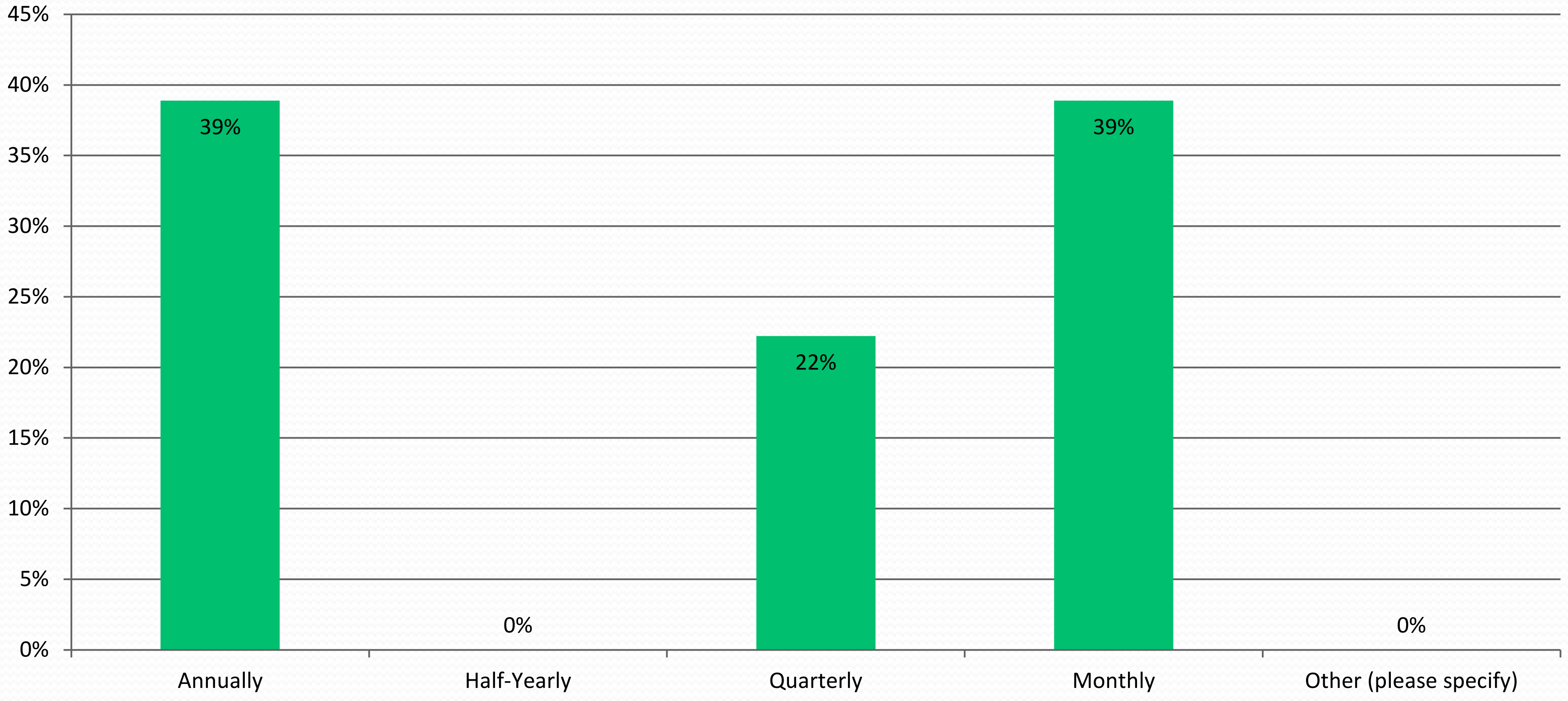
8. How do you account for lapse/ surrender/ paid up profits/losses earned?



9. How frequently do you calculate Asset Share?

A. Annually
B. Half-Yearly
C. Quarterly
D. Monthly
E. Others (please specify)

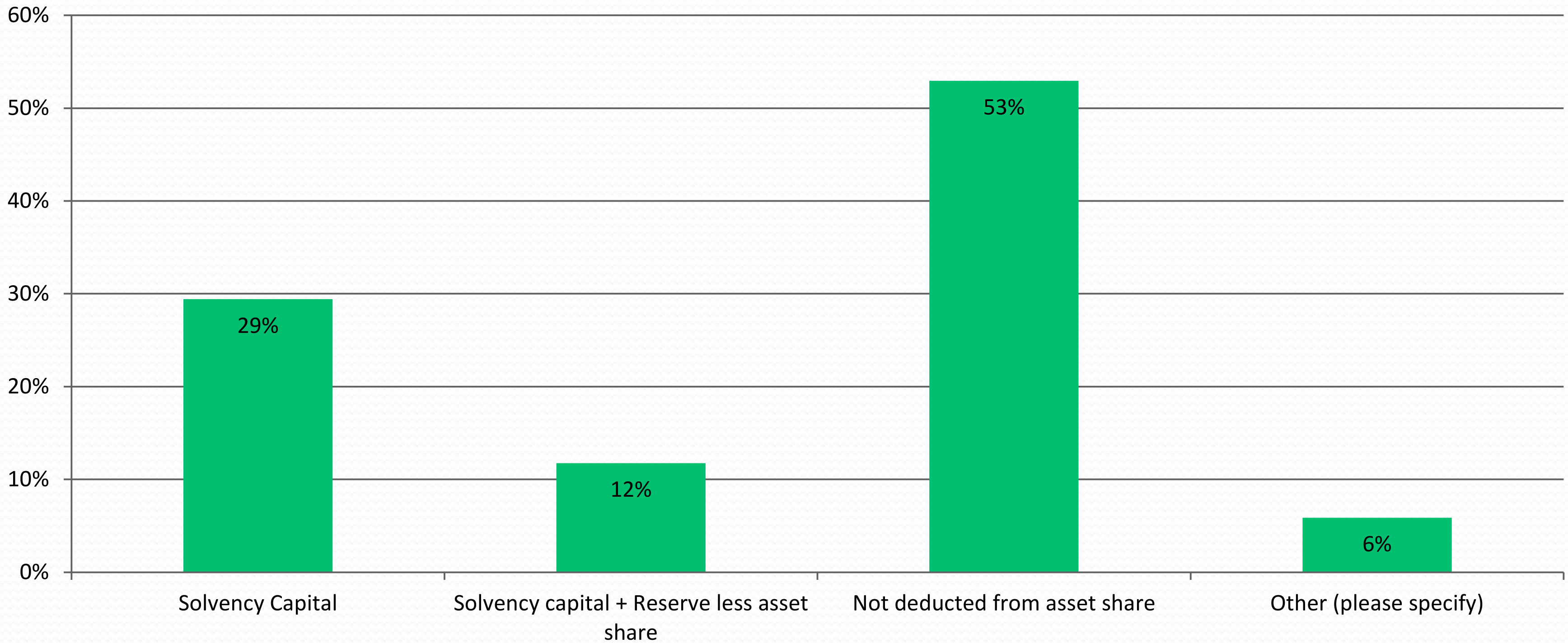
9. How frequently do you calculate Asset Share?



10. The amount of cost of capital to be deducted from asset share is based on:

A. Solvency Capital
B. Solvency capital + Reserve less asset share
C. Not deducted from asset share
D. Others (please specify)

10. The amount of cost of capital to be deducted from asset share is based on:



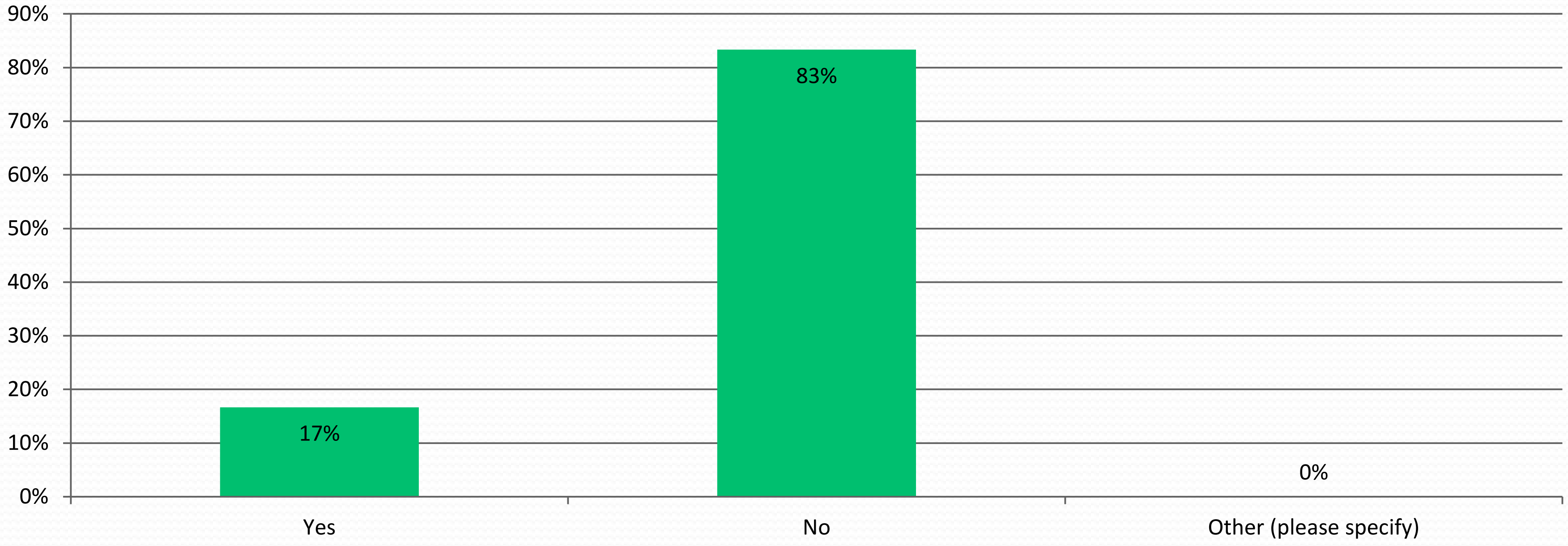
Others:

1. *Solvency capital less estate*

11. Do you maintain a smoothening account balance (This is kept to check how does terminal values compares with Asset share of those policies being terminated)?

A. Yes
B. No
C. Others (please specify)

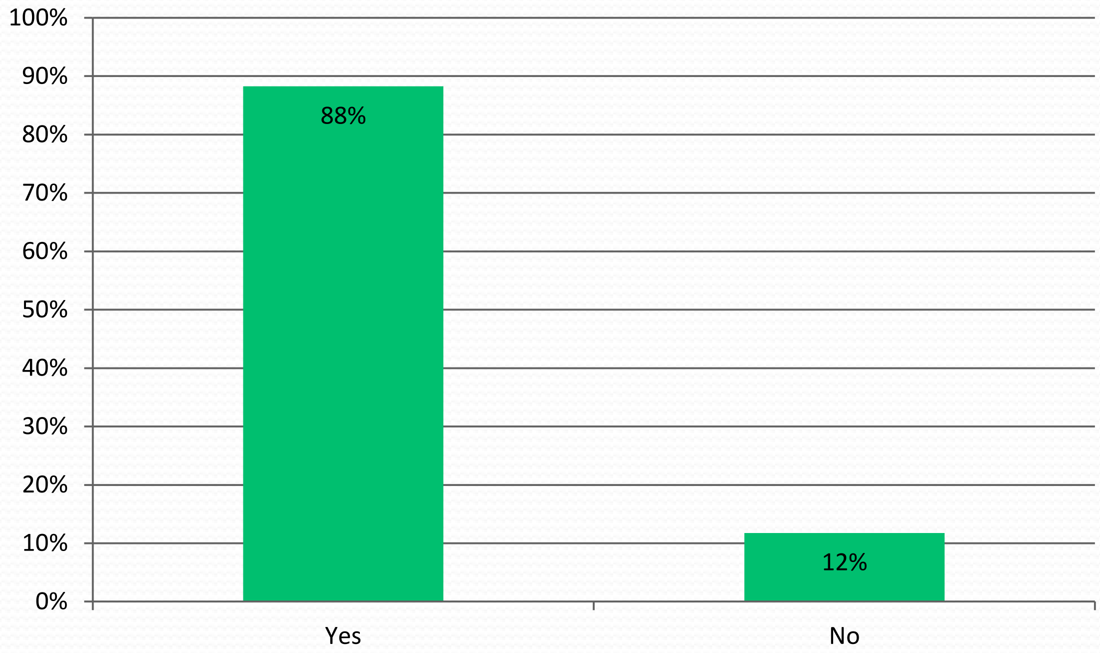
11. Do you maintain a smoothening account balance (This is kept to check how does terminal values compares with Asset share of those policies being terminated)?



12. If the company has not reached breakeven on a year on year basis, are tax deducted from asset share projection?

A. Yes – (optional please provide brief reasons)

B. No – (optional please provide brief reasons)



12. If the company has not reached breakeven on a year on year basis, are tax deducted from asset share projection?

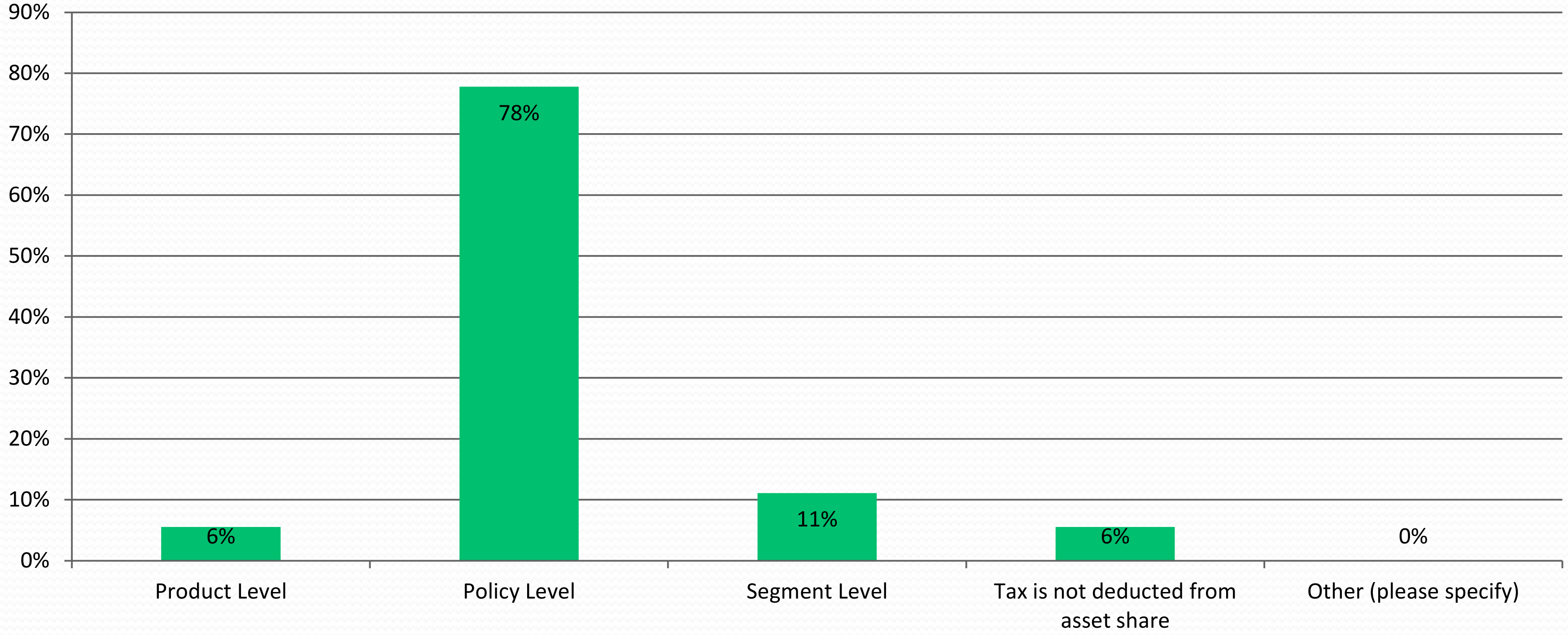
The following reasons were provided where responses were "Yes"

- ✓ Policy has earned surplus individually and is subject to tax
- ✓ Asset share are based on steady state position
- ✓ Any benefit of tax holidays is passed on to the estate
- ✓ Min(priced expenses, actual expenses) are charged for being consistent with PRE created through BI. Also it is fair to charge tax because the bonuses shown in BI are after making the effect of taxes.
- ✓ Maintain equity and parity across generation of policyholders
- ✓ In line with Pricing and Benefit Illustration
- ✓ In lieu of cost of capital

13. For determining taxes to be deducted from asset share, tax is applied on surpluses emanating at:

A. Product Level
B. Policy Level
C. Segment Level
D. Tax is not deducted from asset share
E. Others (please specify)

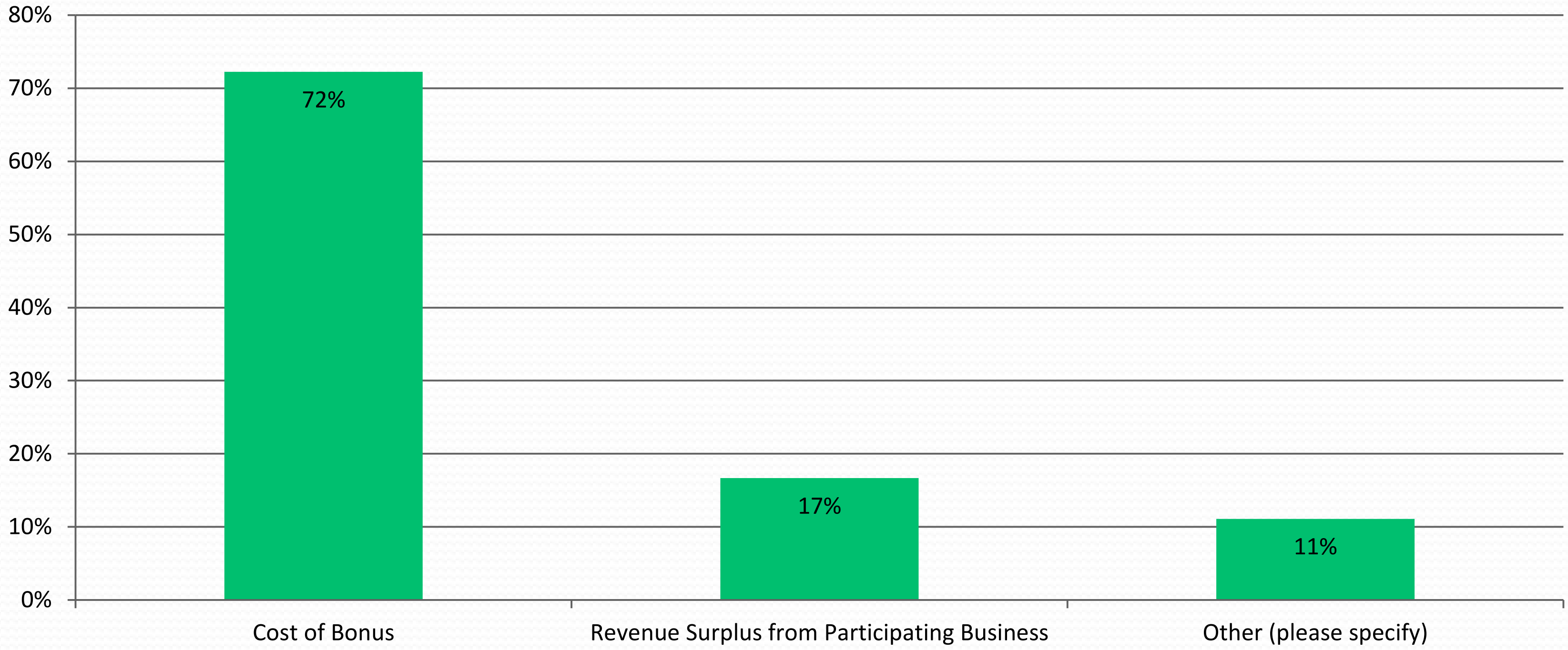
13. For determining taxes to be deducted from asset share, tax is applied on surpluses emanating at:



14. The amount of tax to be deducted from asset share is based on:

A. Cost of Bonus
B. Revenue Surplus from Participating Business
C. Others (please specify)

14. The amount of tax to be deducted from asset share is based on:



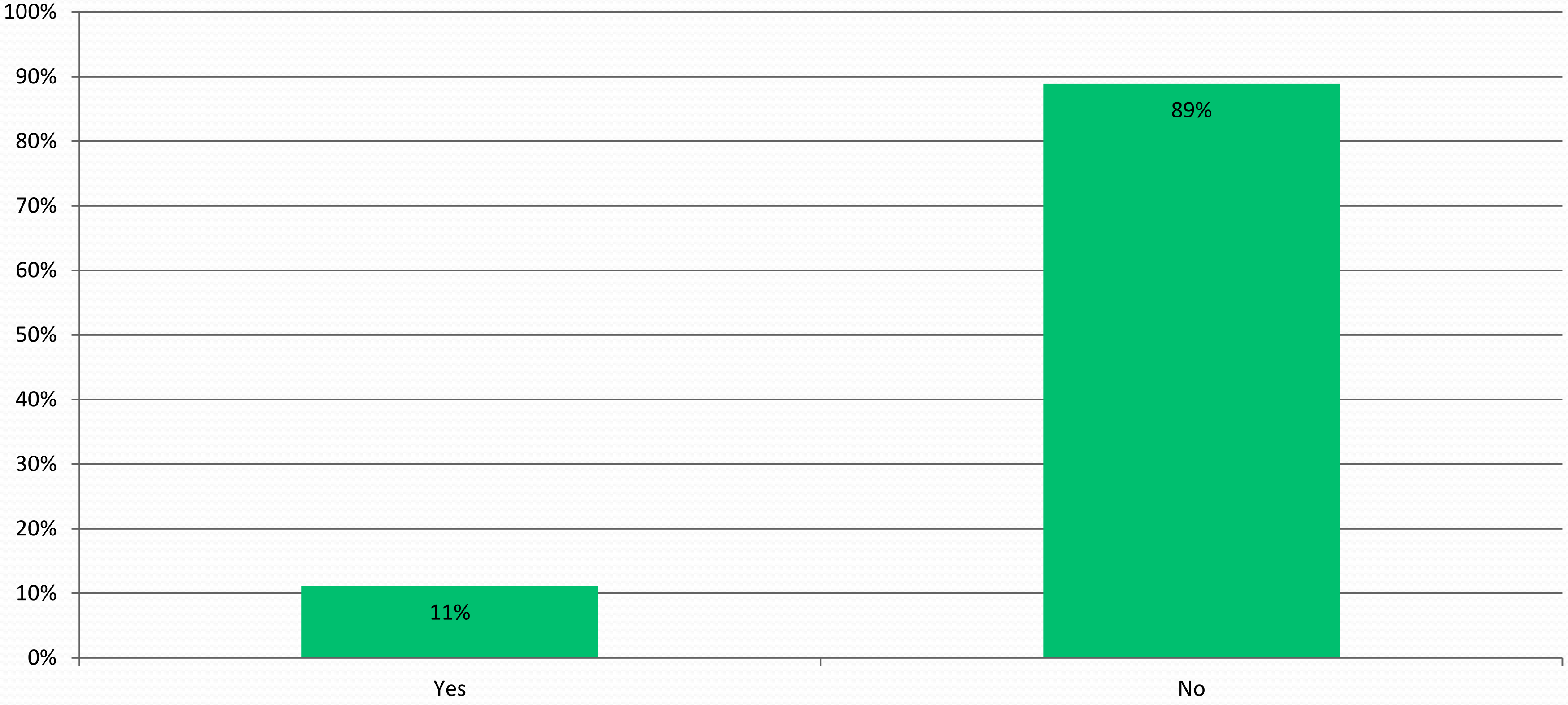
Others:

1. *Par fund is not taxed currently*
2. *Combination of both*

15. Do you calculate asset share including rider policies:

A. Yes
B. No

15. Do you calculate asset share including rider policies:



16. Please share your brief methodology of calculating asset share in terms of tax treatment

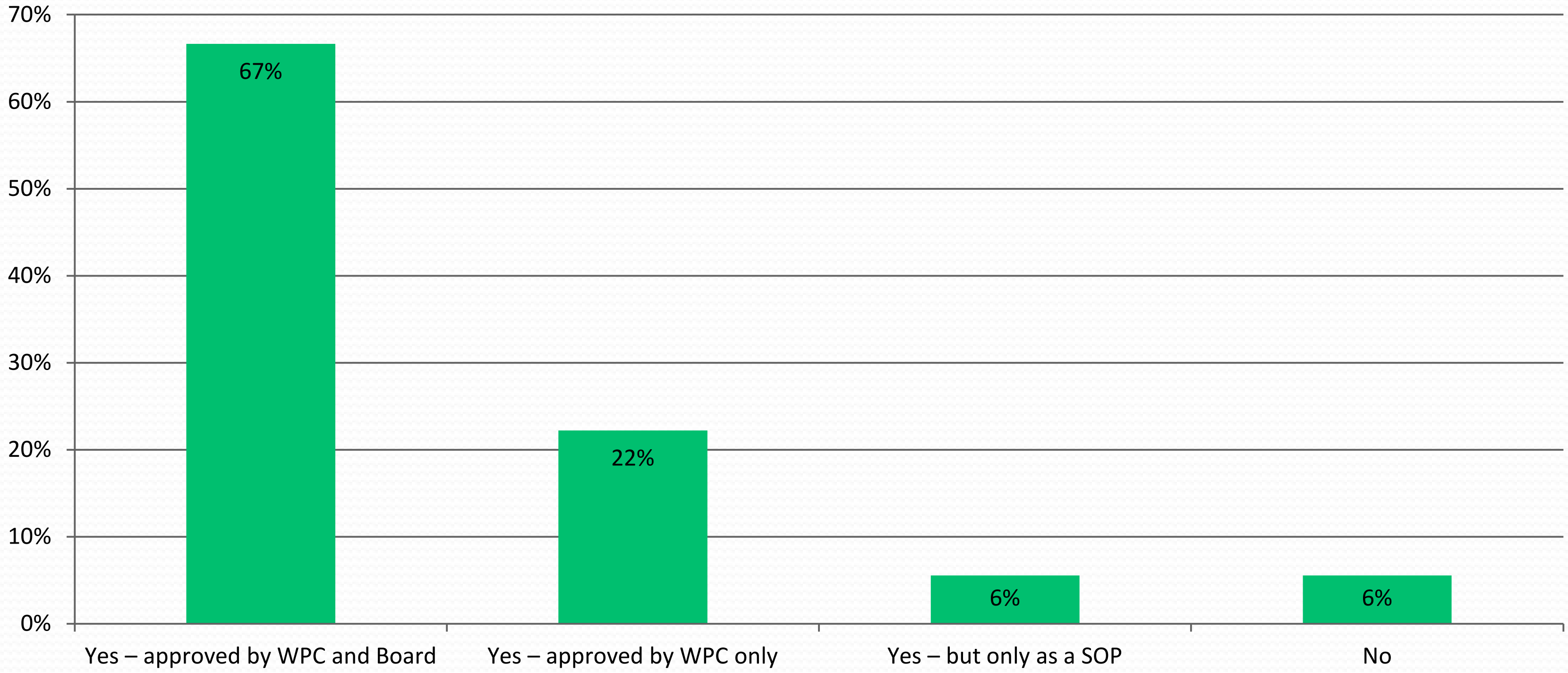
Tax applied on:

- ✓ Cost of Bonus and Shareholder Transfers
- ✓ Asset Share at a Policy Level
- ✓ Not Applied
- ✓ Revenue Surplus
- ✓ The asset share will be deducted by an amount of tax that relates to the quantum of taxable surplus (distributed as well as deferred) which is shared with policyholders through the asset share. For that quantum of taxable surplus which is not shared with the policyholders but is credited to the Estate, the tax will also be borne by the Estate.

17. Do you have any formal document covering how to manage participating business including its principles and practices (such as PPFM) which is approved by WPC/Board:

A. Yes – approved by WPC and Board
B. Yes – approved by WPC only
C. Yes – but only as a SOP
D. No

17. Do you have any formal document covering how to manage participating business including its principles and practices (such as PPFM) which is approved by WPC/Board:



18. If yes to above, please share some key items covered in the document

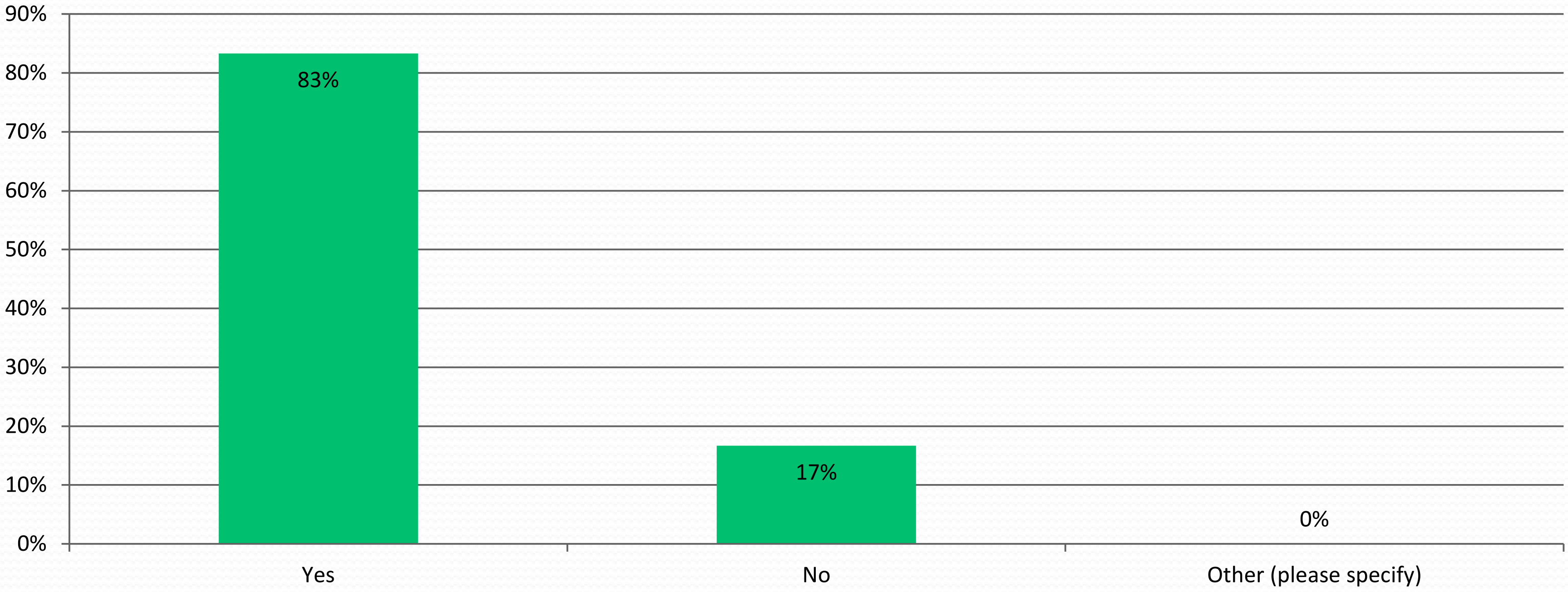
- ✓ Policyholders' Reasonable Expectations
- ✓ IRR to Policyholders
- ✓ Actual Experience & Fund Track Record
- ✓ ALM Position
- ✓ Benefits Paid Vs Asset Share
- ✓ Capital Management Principles
- ✓ Smoothing Principles
- ✓ Bonus Determination Assumptions
- ✓ Investment Philosophy
- ✓ Asset Share Methodology
- ✓ Reinsurance
- ✓ Legislation and Professional Guidelines
- ✓ Sources of Surplus
- ✓ Allocation of Surplus to Regular Bonus and Terminal Bonus
- ✓ Management of Inherited Estate

PART 2
RESERVES

19. Are statutory reserves (of if-force portfolio or for policies eligible to earn future bonuses) checked against asset share?

A. Yes
B. No
C. Others (please specify)

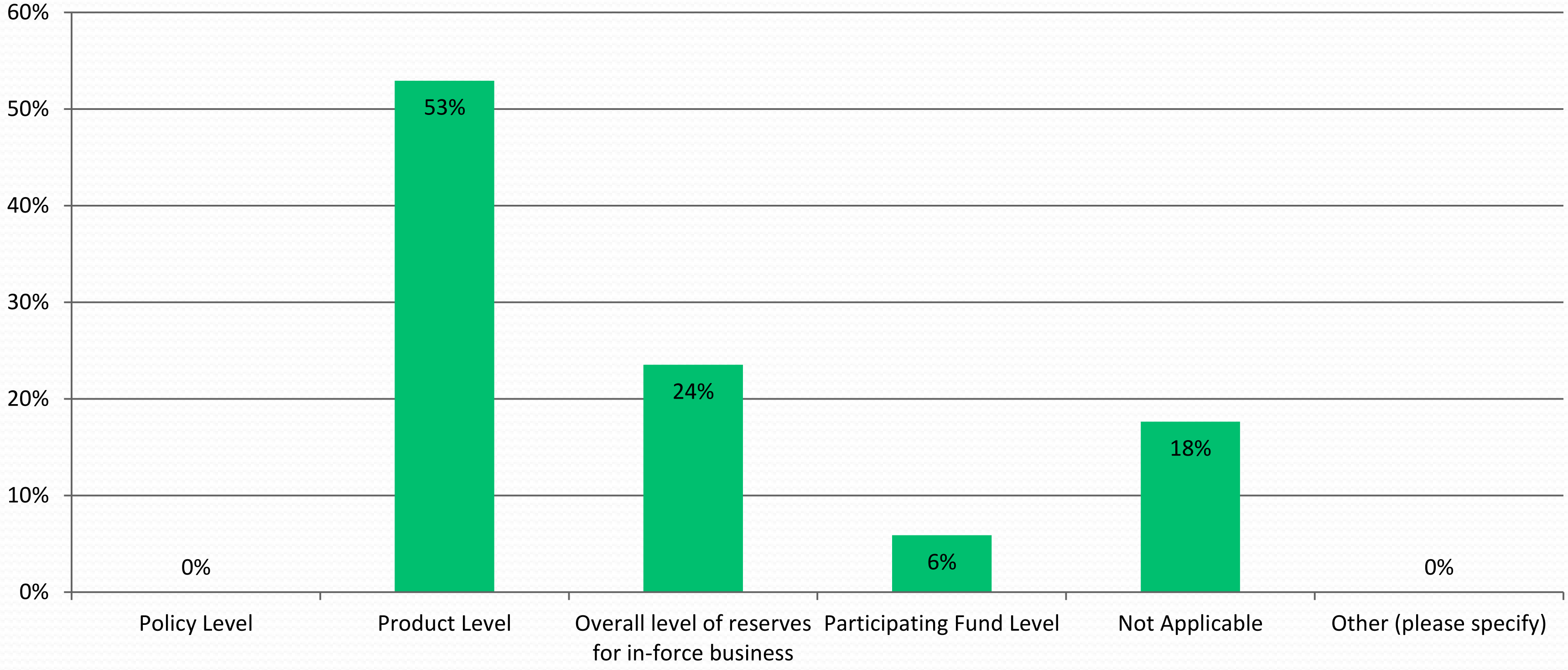
19. Are statutory reserves (of if-force portfolio or for policies eligible to earn future bonuses) checked against asset share?



20. If YES to the above, while comparing reserves to asset shares, it is compared and checked at?

A. Policy Level
B. Product Level
C. Overall level of reserves for in-force business
D. Participating Fund Level
E. Not Applicable
F. Others (please specify)

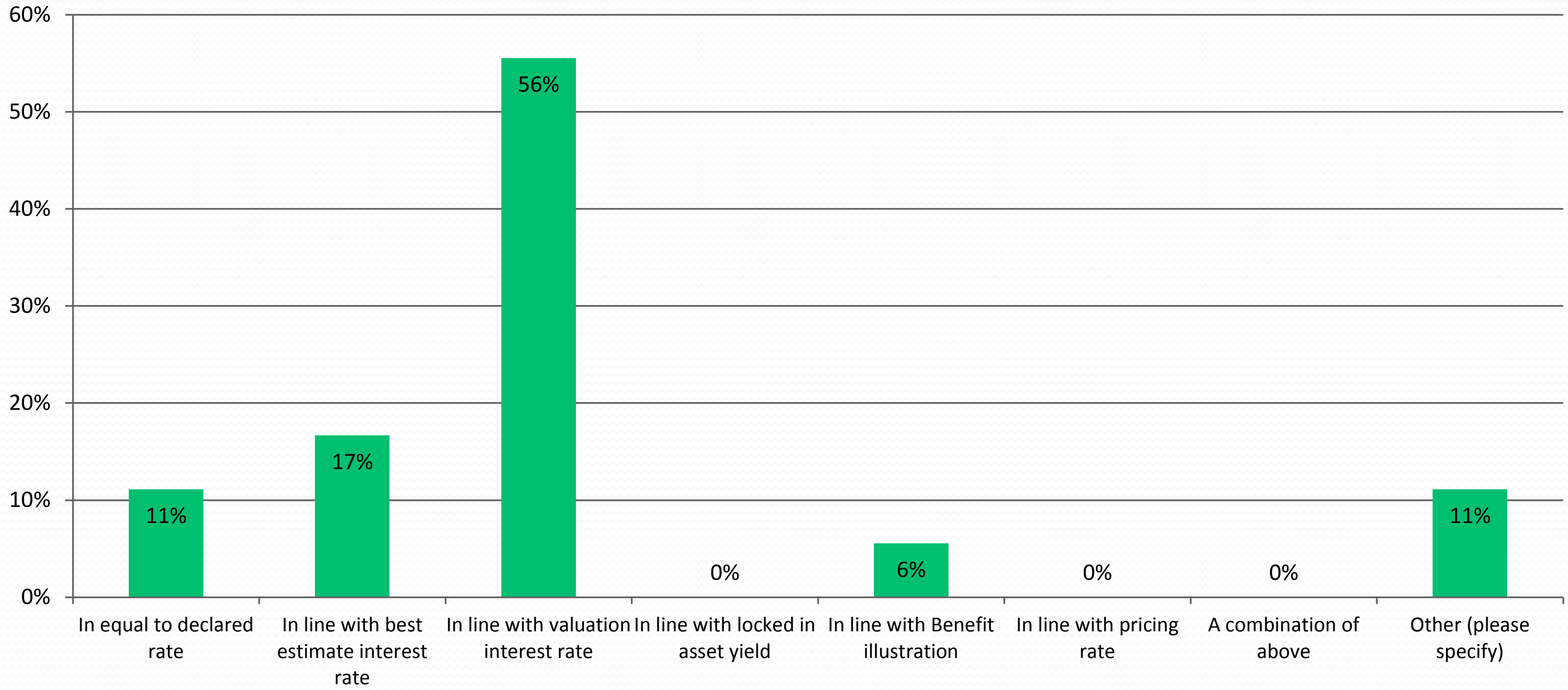
20. If YES to the above, while comparing reserves to asset shares, it is compared and checked at?



21. The regular bonus rate used for reserving is:

A. In equal to declared rate
B. In line with best estimate interest rate
C. In line with valuation interest rate
D. In line with locked in asset yield
E. In line with Benefit illustration
F. In line with pricing rate
G. A combination of above – please specify
H. Others (please specify)

21. The regular bonus rate used for reserving is:



Others:

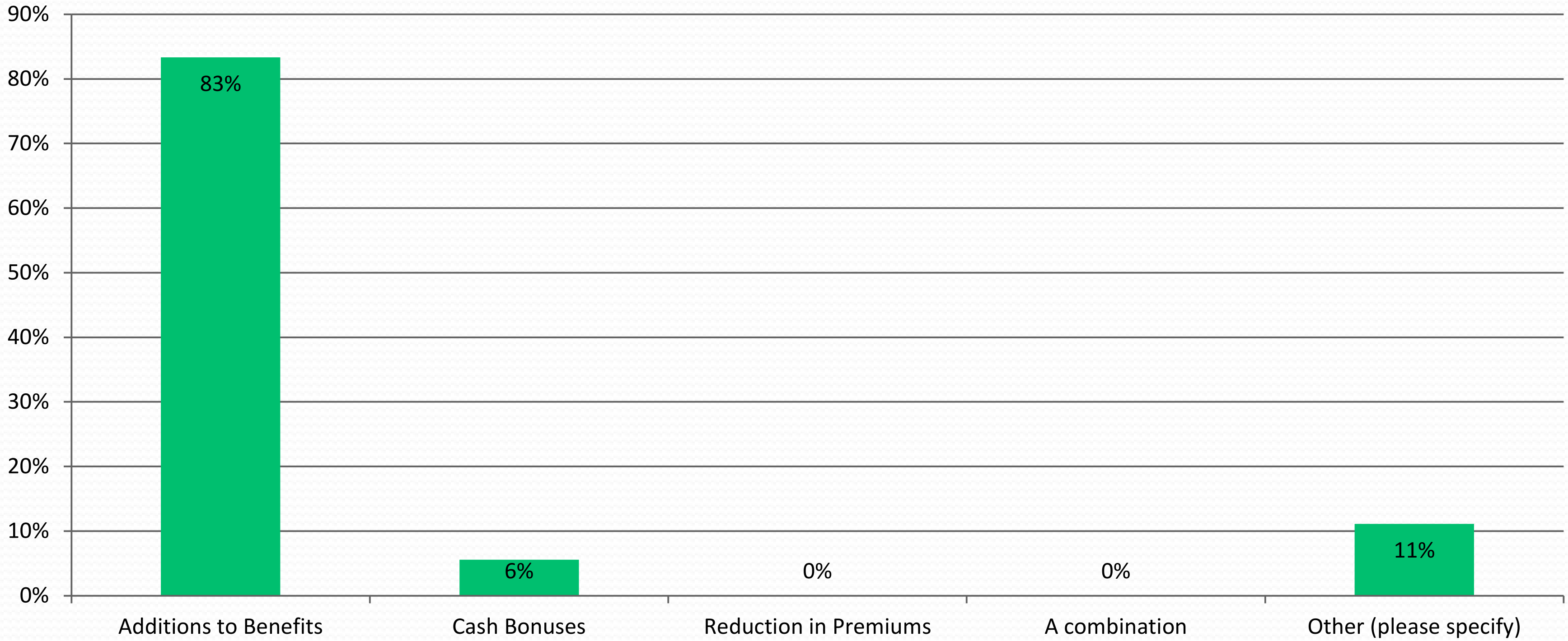
1. *Combination of Valuation Interest Rate and Benefit Illustration*
2. *Combination of Valuation Interest Rate, Benefit Illustration and Pricing*

PART 3
BONUS

22. For majority of your products launched recently, how is the regular bonuses declared?

A. Additions to Benefits
B. Cash Bonuses
C. Reduction in Premiums
D. A combination – please specify
E. Others (please specify)

22. For majority of your products launched recently, how is the regular bonuses declared?



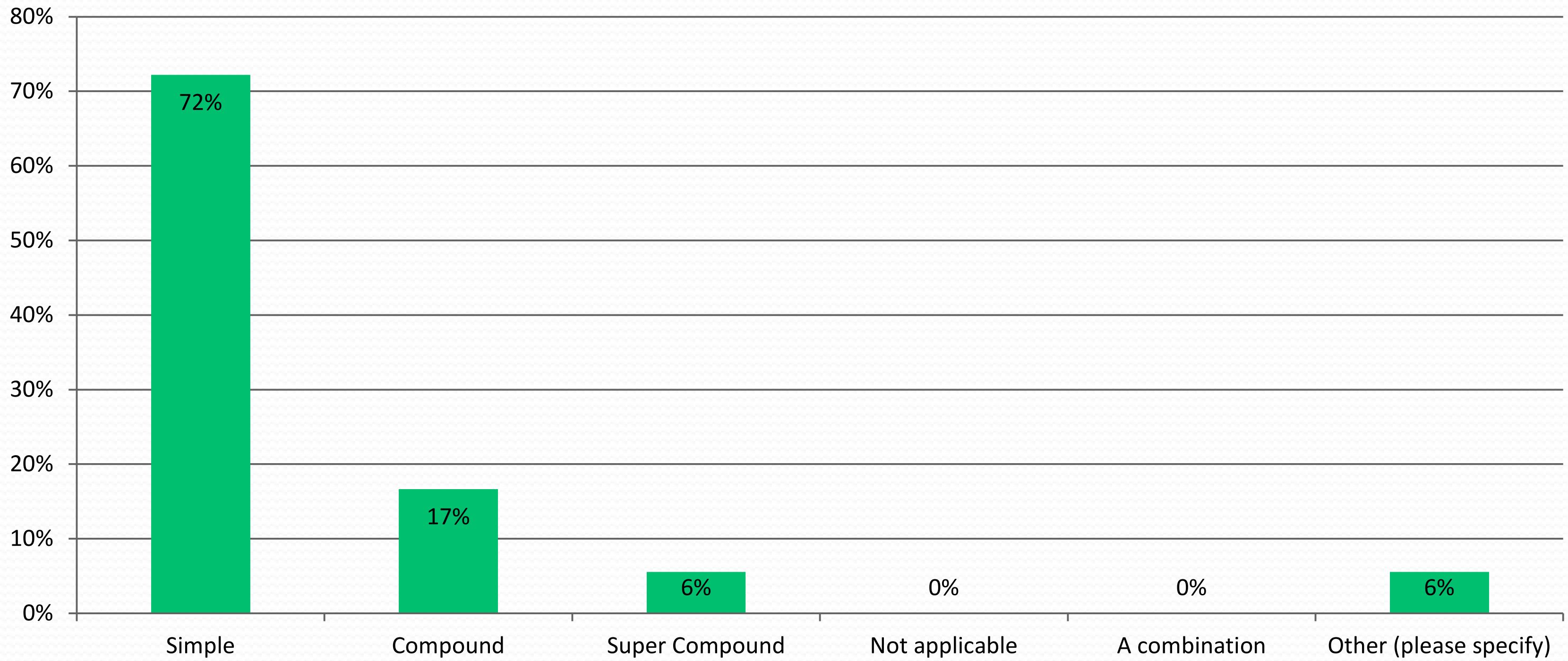
Others:

1. *Combination of Additions to Benefits and Cash Bonuses*

23. For majority of your products launched recently, regular bonuses under addition to benefits approach is defined as?

A. Simple
B. Compound
C. Super Compound
D. Not applicable
E. A combination – please specify
F. Others (please specify)

23. For majority of your products launched recently, regular bonuses under addition to benefits approach is defined as?



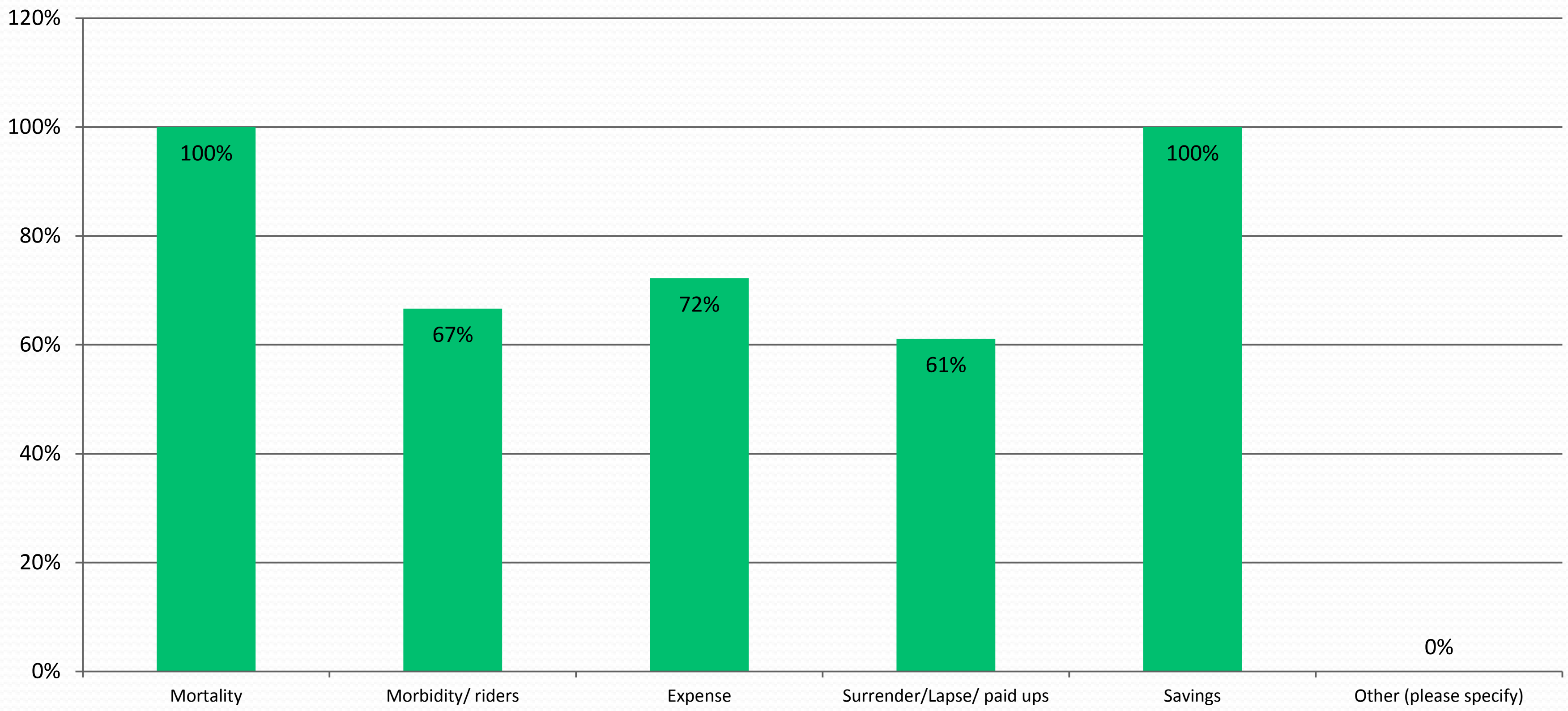
Others:

1. *Combination of Simple and Compound*

24. Which profit/losses are shared with participating policyholder (you may choose multiple options)?

A. Mortality
B. Morbidity/ riders
C. Expense
D. Surrender/Lapse/ paid ups
E. Savings
F. Others (please specify)

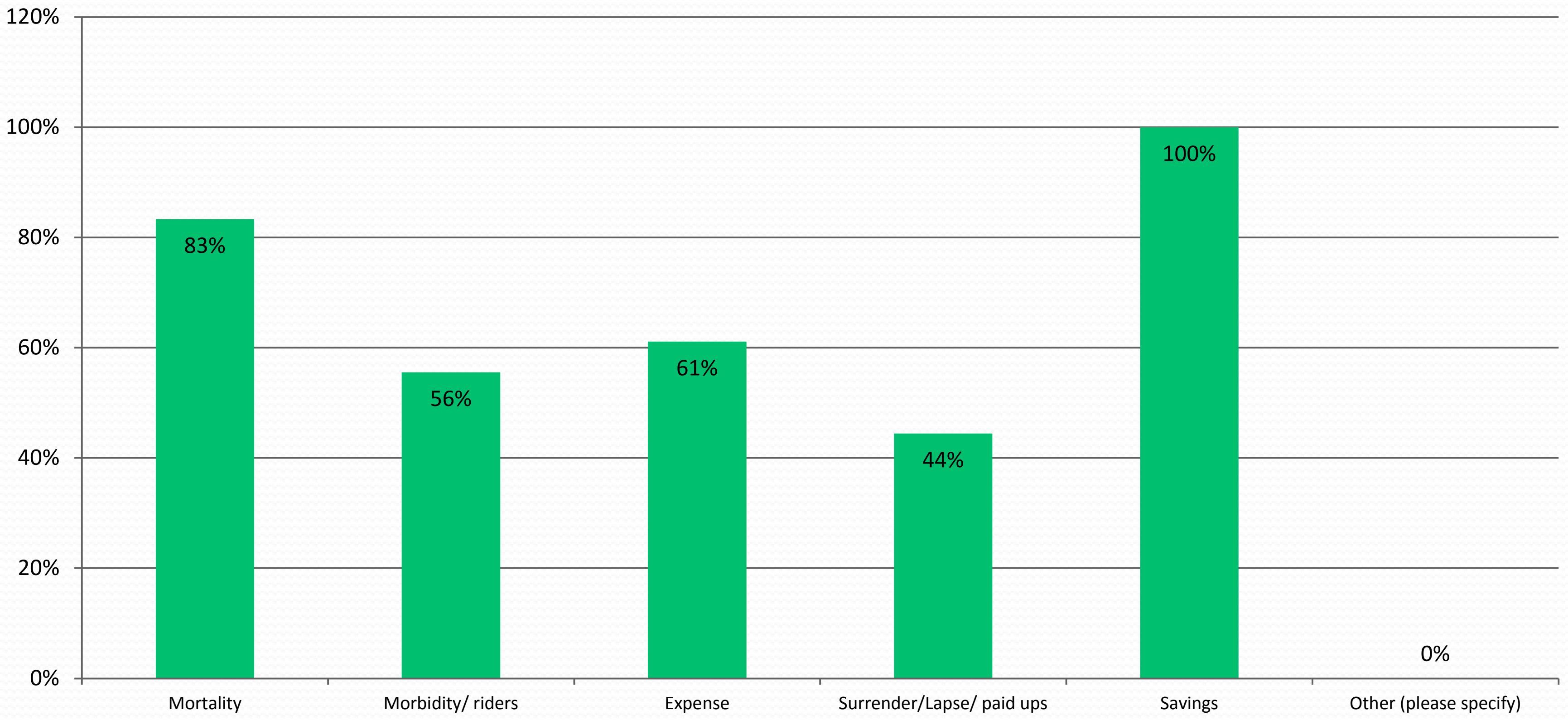
24. Which profit/losses are shared with participating policyholder (you may choose multiple options)?



25. Which profit/losses are shared as part of reversionary/regular bonuses (you may choose multiple options)?

A. Mortality
B. Morbidity/ riders
C. Expense
D. Surrender/Lapse/ paid ups
E. Savings
F. Others (please specify)

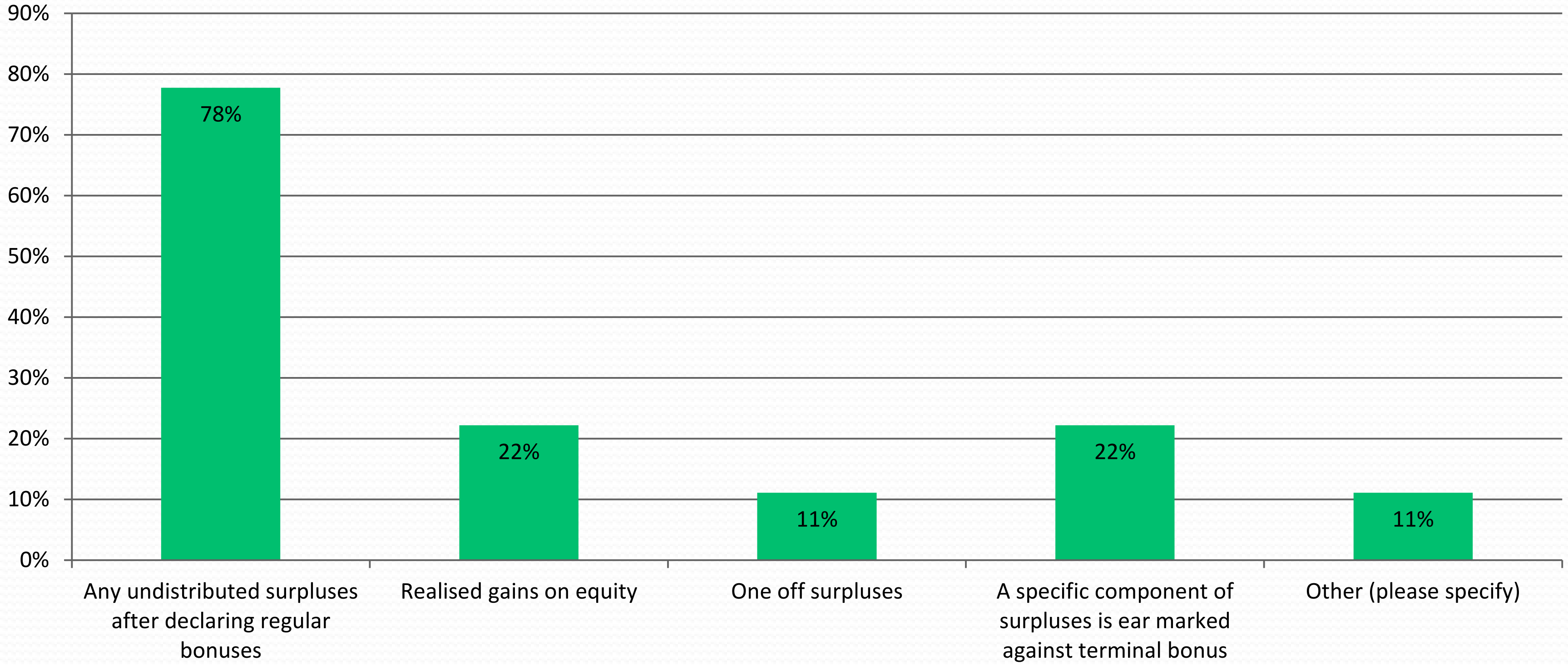
25. Which profit/losses are shared as part of reversionary/regular bonuses (you may choose multiple options)?



26. Which surpluses form part of terminal bonus (you may choose multiple options)?

A. Any undistributed surpluses after declaring regular bonuses
B. Realised gains on equity
C. One off surpluses
D. A specific component of surpluses is ear marked against terminal bonus
E. Others (please specify)

26. Which surpluses form part of terminal bonus (you may choose multiple options)?



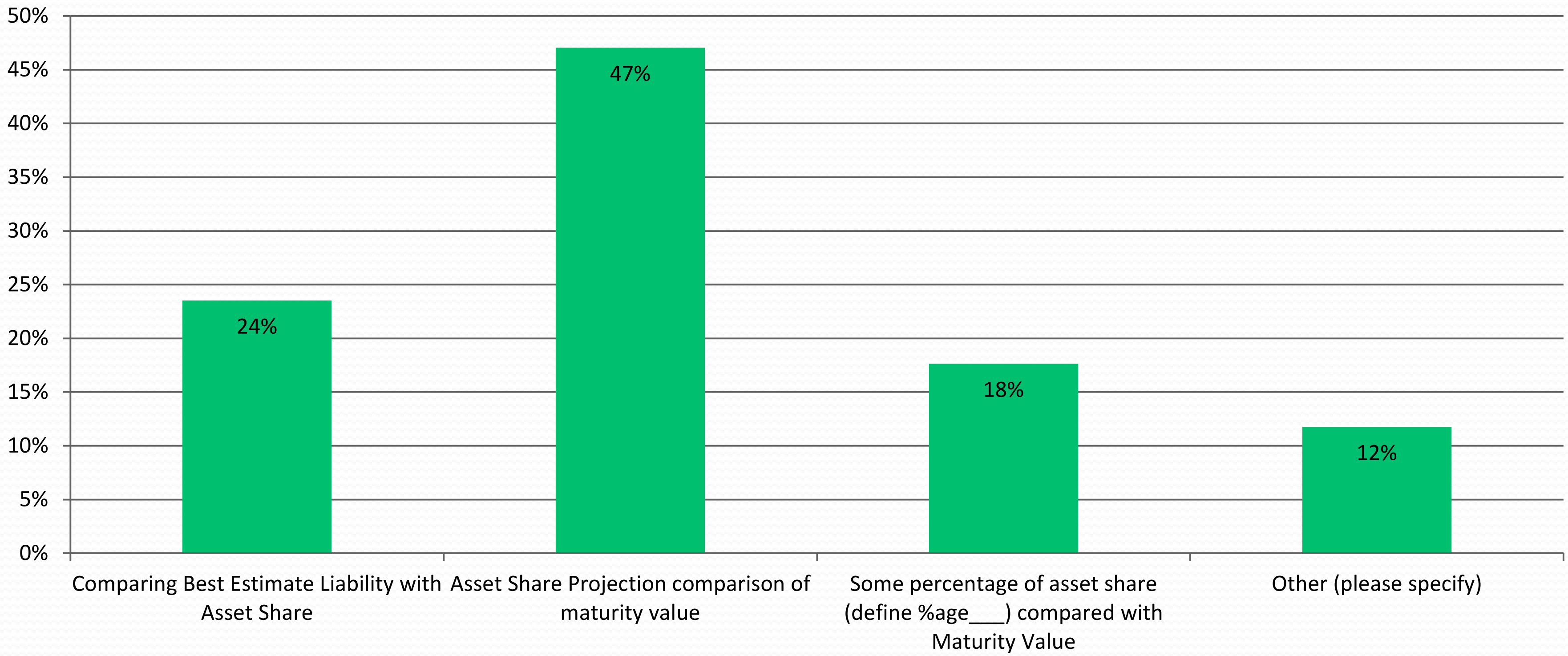
Others:

1. *Not Yet Declared Terminal Bonuses*

27. What is your methodology of determining regular bonus rates?

A. Comparing Best Estimate Liability with Asset Share
B. Asset Share Projection comparison of maturity value
C. Some percentage of asset share (define %age___) compared with Maturity Value
D. Others (please specify)

27. What is your methodology of determining regular bonus rates?



% defined for Asset Share:

1. *90%-110%*
2. *80%*

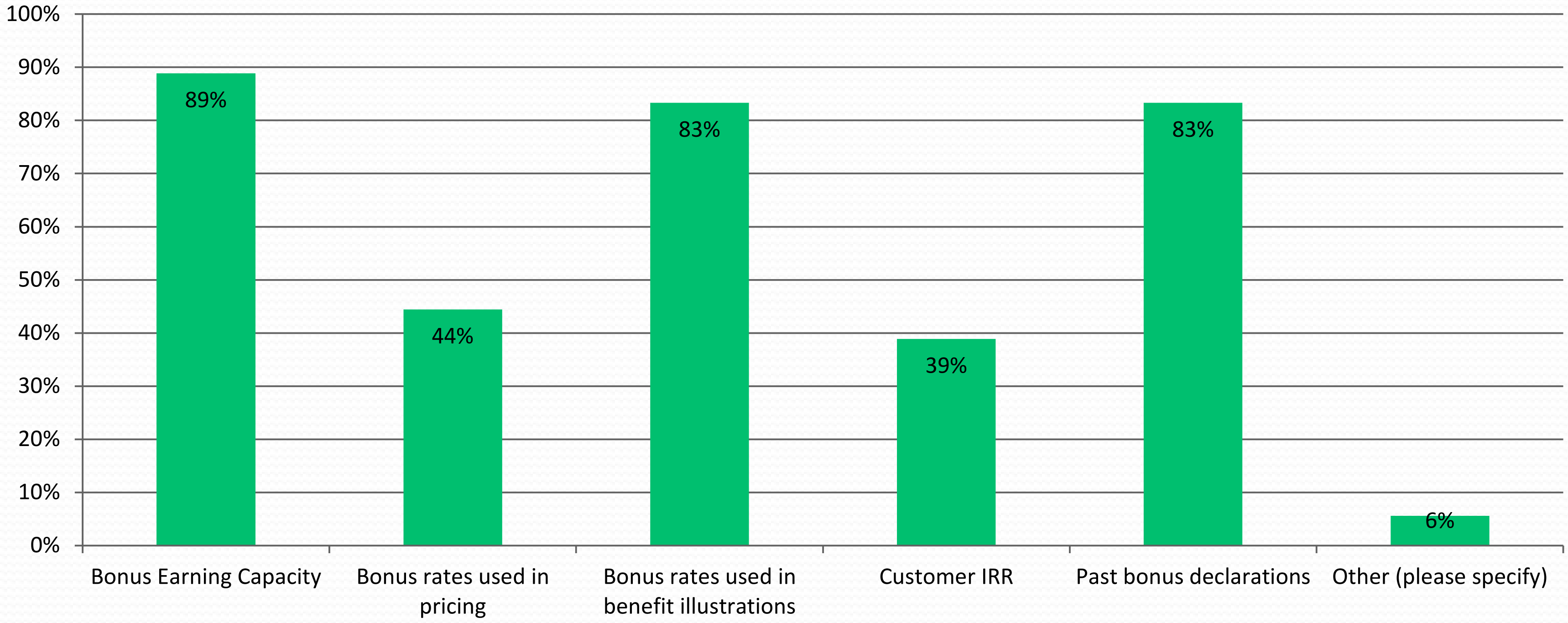
Others:

1. *At the moment it is based on pricing rate*
2. *Bonus rates vary with best estimate interest rates*

28. What key considerations are kept in mind while declaring bonuses for the year (you may choose multiple options)?

A. Bonus Earning Capacity
B. Bonus rates used in pricing
C. Bonus rates used in benefit illustrations
D. Customer IRR
E. Past bonus declarations
F. Others (please specify)

28. What key considerations are kept in mind while declaring bonuses for the year (you may choose multiple options)?



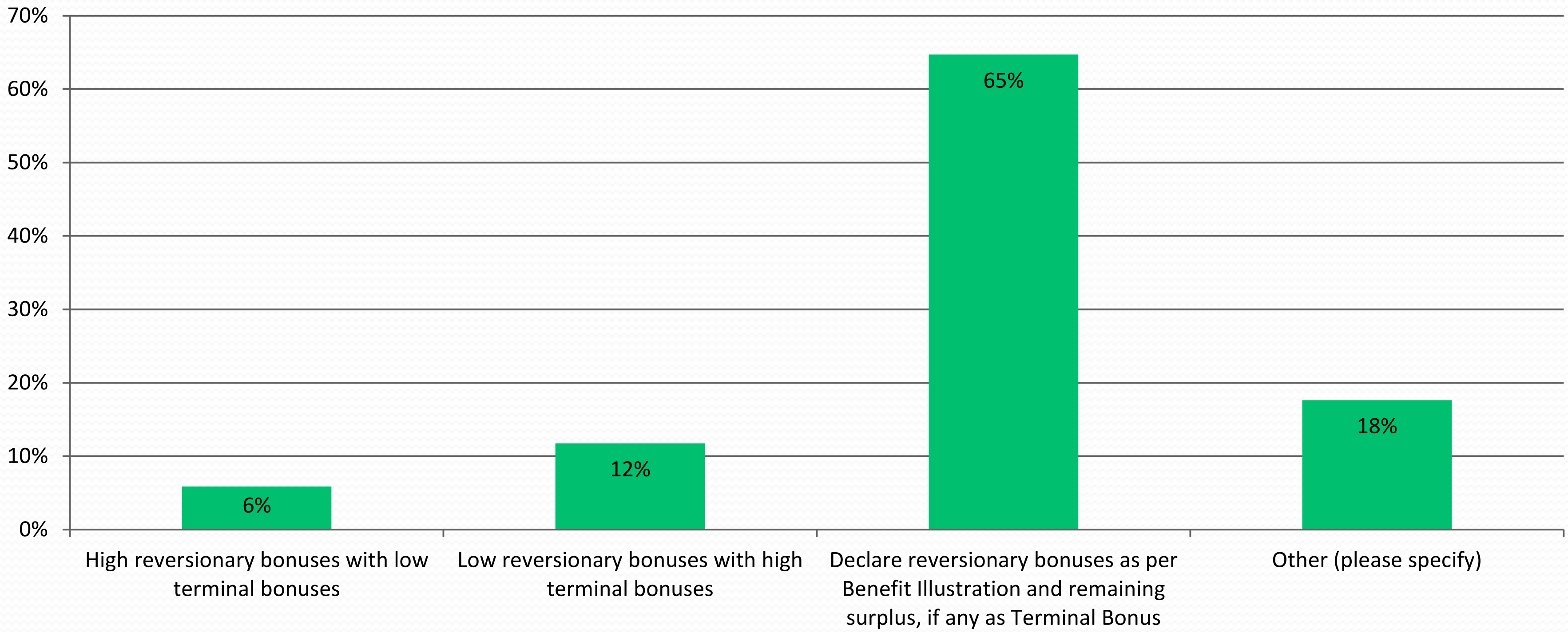
Others:

1. *Best estimate interest rates*

29. What is your current bonus philosophy?

A. High reversionary bonuses with low terminal bonuses
B. Low reversionary bonuses with high terminal bonuses
C. Declare reversionary bonuses as per Benefit Illustration and remaining surplus, if any as Terminal Bonus
D. Others (please specify)

29. What is your current bonus philosophy?



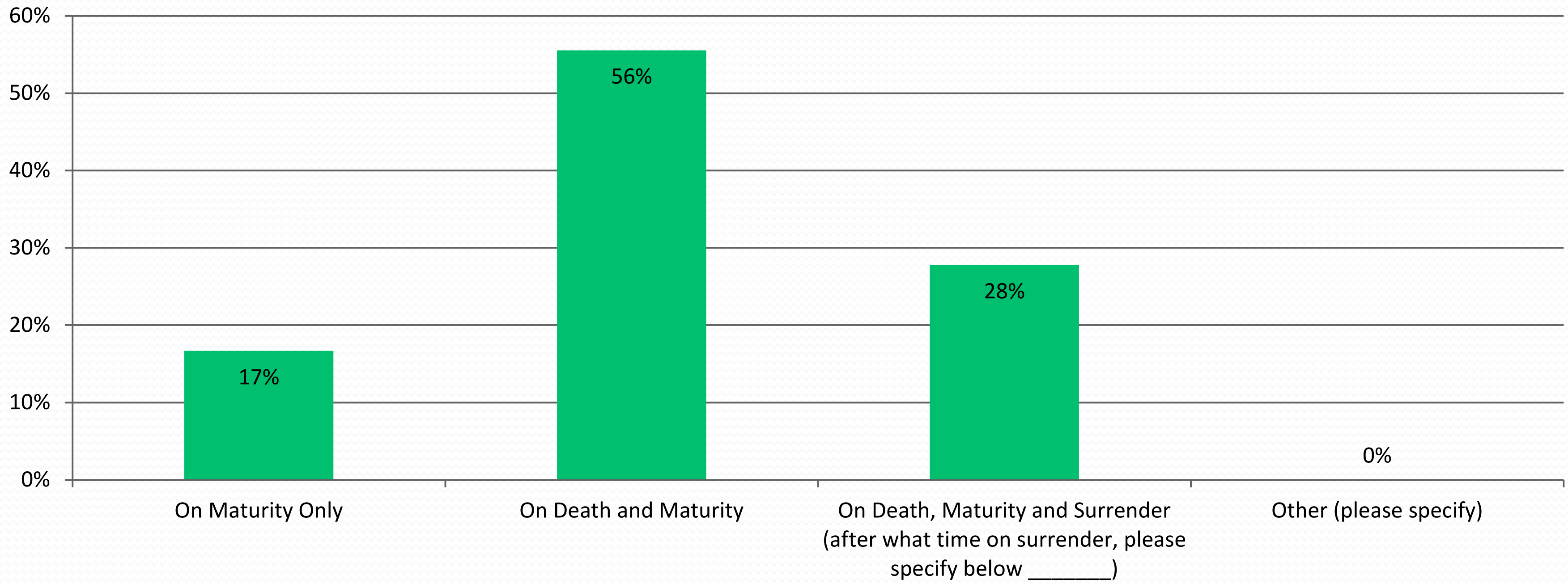
Others:

1. *As per BEC and remaining surplus if any as Terminal Bonus*
2. *Reversionary bonus is declared in line with pricing best estimate basis and remaining surplus, at the time of exit, is distributed as Terminal Bonus*
3. *Low RB with High TB and consistent with BI*

30. When is terminal bonus payable?

A. On Maturity Only
B. On Death and Maturity
C. On Death, Maturity and Surrender (please specify after what time on surrender ________)
D. Others (please specify)

30. When is terminal bonus payable?



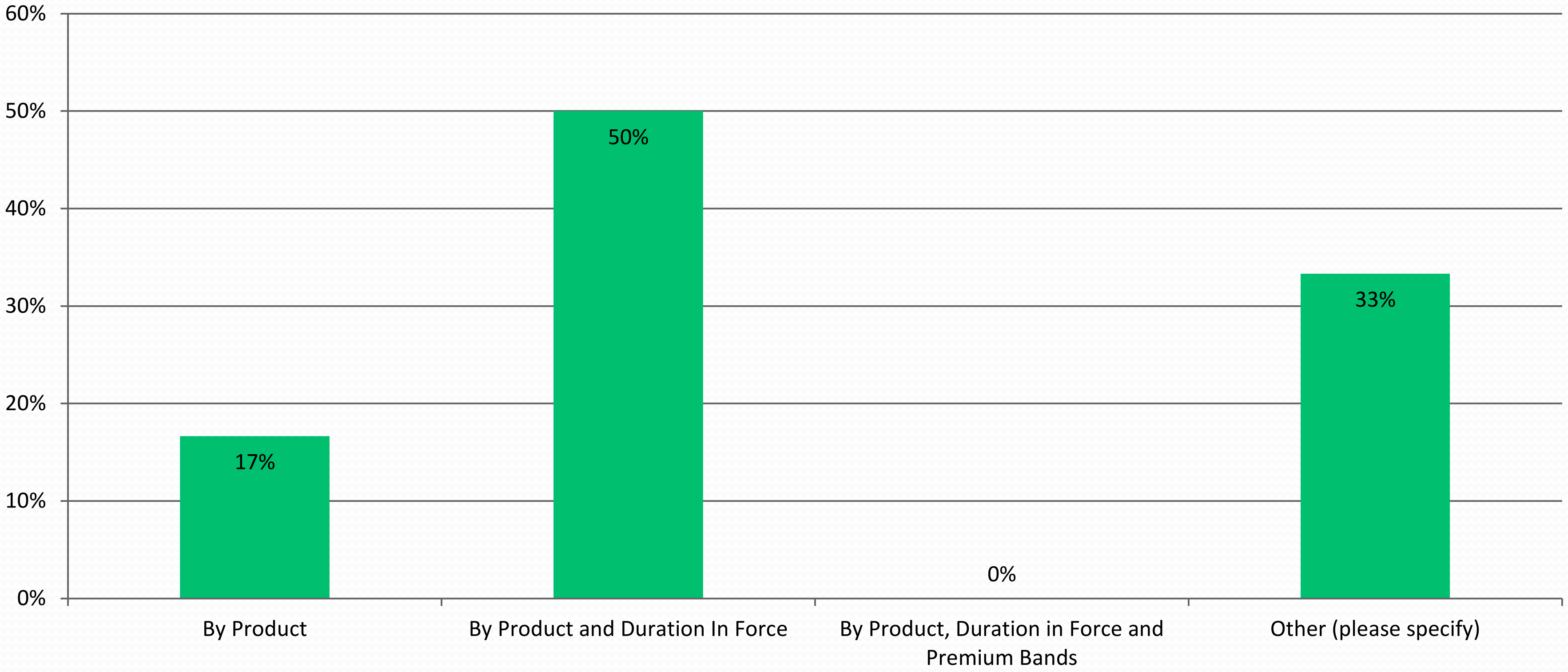
Terminal Bonus is provided after the following time on surrender:

1. *Once GSV is acquired*
2. *After Year 5*
3. *After Year 10*

31. How do terminal bonus rates vary?

A. By Product
B. By Product and Duration In Force
C. By Product, Duration in Force and Premium Bands
D. Others (please specify)

31. How do terminal bonus rates vary?



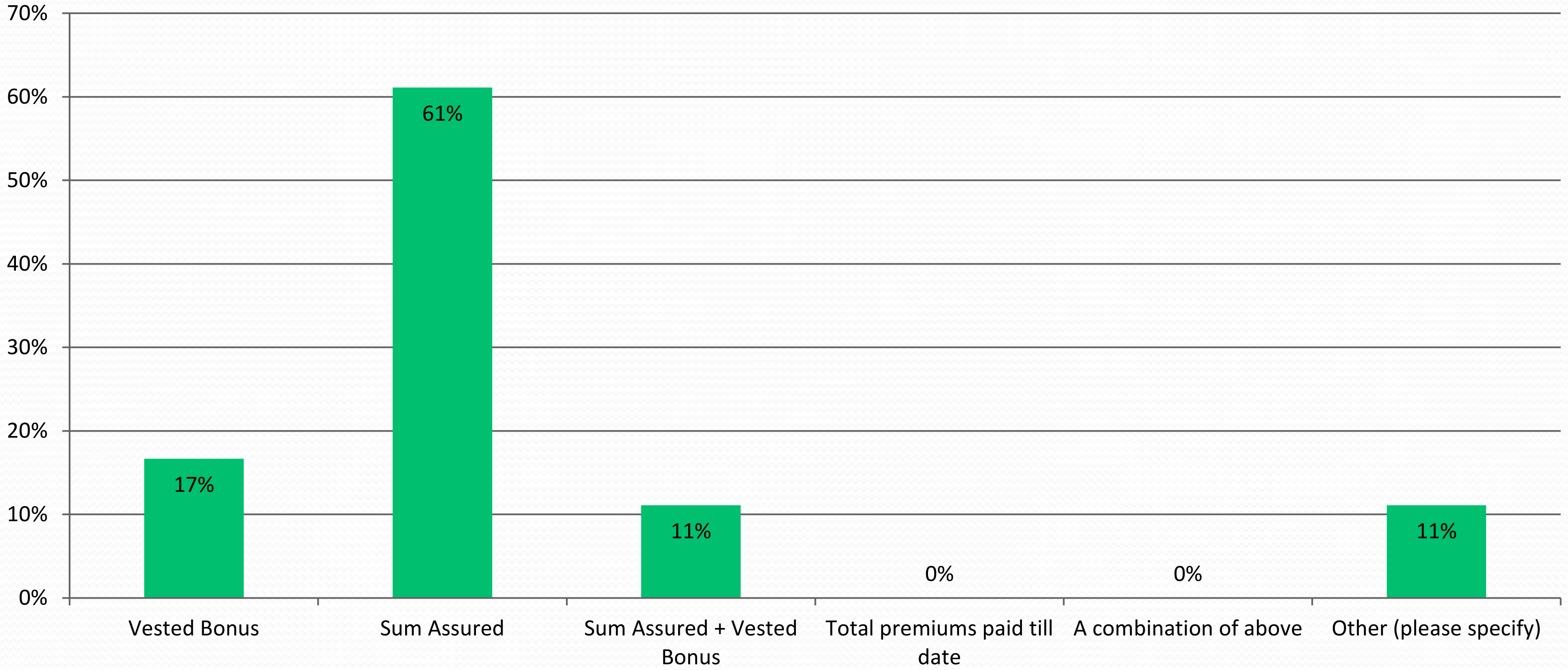
Others:

1. *By policy term*
2. *Not declared terminal bonuses till date*
3. *By Product, Policy Term and Premium Payment Term*

32. Terminal bonus is declared on:

A. Vested Bonus
B. Sum Assured
C. Sum Assured + Vested Bonus
D. Total premiums paid till date
E. A combination of above – please specify
F. Others (please specify)

32. Terminal bonus is declared on:



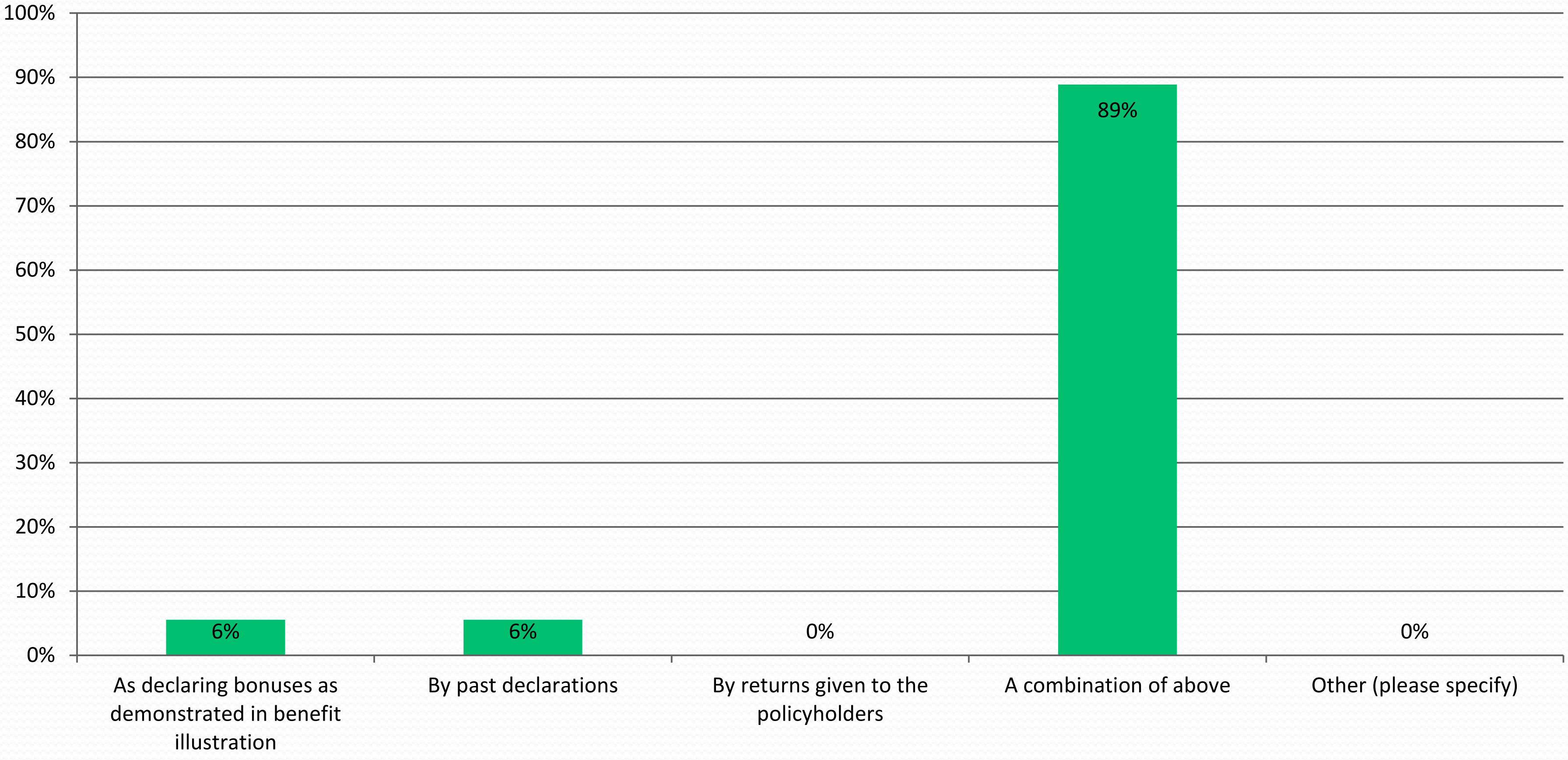
Others:

1. *Not declared terminal bonuses till date*

33. How is PRE created in the organisation?

A. As declaring bonuses as demonstrated in benefit illustration
B. By past declarations
C. By returns given to the policyholders
D. A combination of above – please specify
E. Others (please specify)

33. How is PRE created in the organisation?

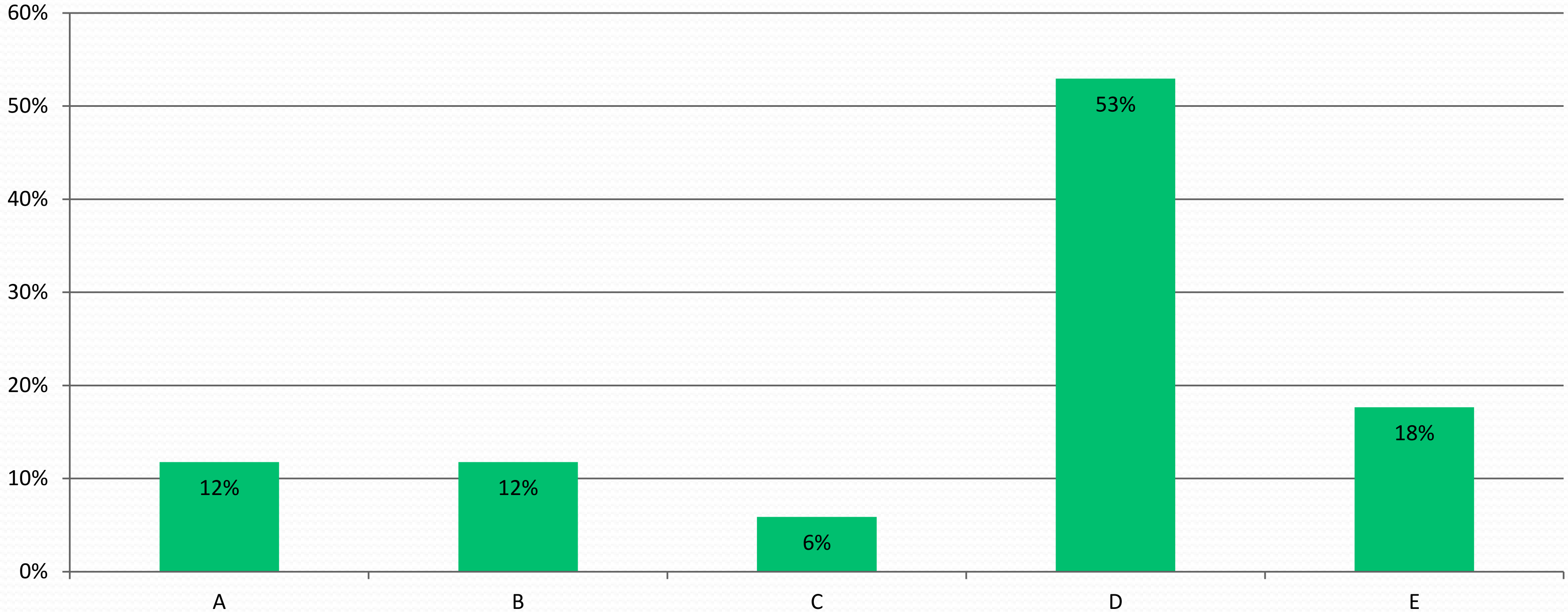


PART 4
WITH PROFITS FUND

34. What is the methodology of asset and liability matching in the participating fund?

A. Current Month Asset position = locked liability of previous month + locked FFA of previous month
B. Current Month Asset position = locked liability of previous month + locked FFA of previous month + projected liability of current month
C. Current Month Asset position = locked liability of previous month + locked FFA of previous month + projected liability of current month + projected FFA of current month
D. Current Month Asset position = locked liability of previous month + locked FFA of previous month + premium received from participating business net of expenses and claims during the month
E. Others (please specify)

34. What is the methodology of asset and liability matching in the participating fund?



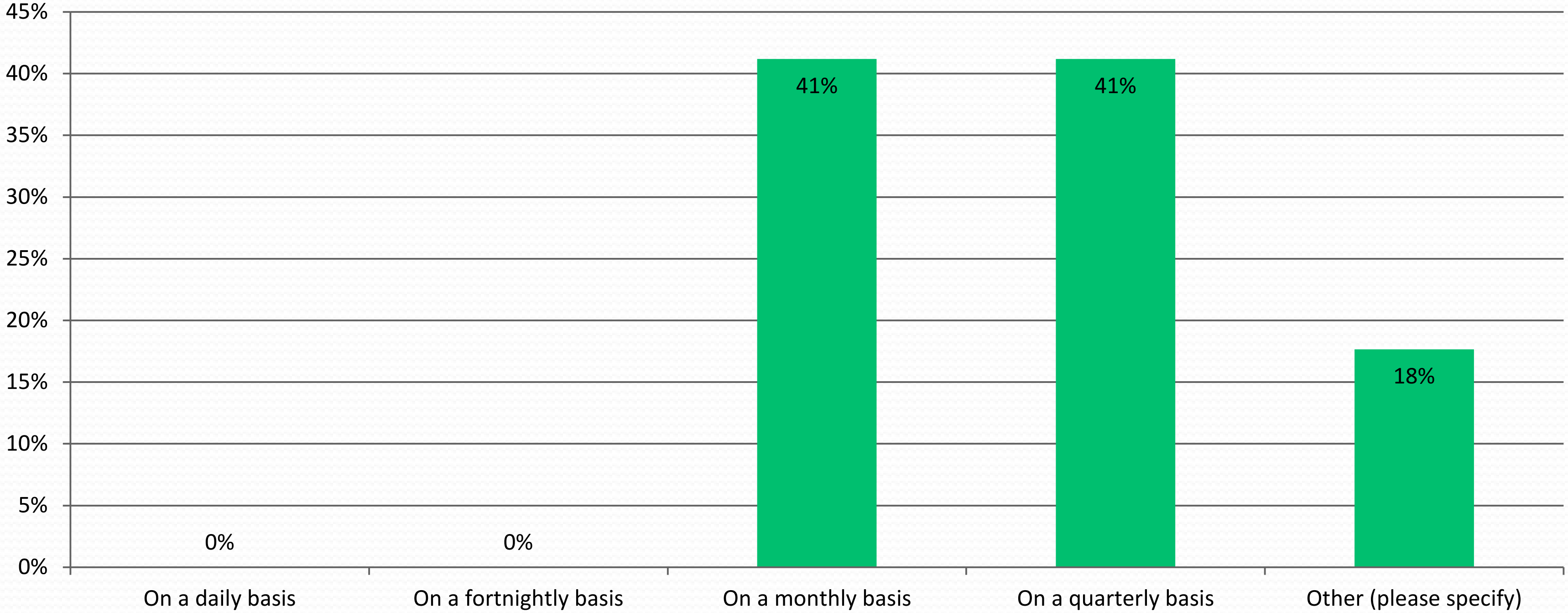
Others:

1. *currently ALM is done at the total par fund level. i.e. the duration/cash flow matching assessments are done at the par fund level*
2. *No asset liability matching*
3. *We keep assets equal to GPV as there was no FFA till last year and any shortfall was funded at the year end*

35. How frequently are assets and liabilities in the participating fund matched?

A. On a daily basis
B. On a fortnightly basis
C. On a monthly basis
D. On a quarterly basis
E. Others (please specify)

35. How frequently are assets and liabilities in the participating fund matched?



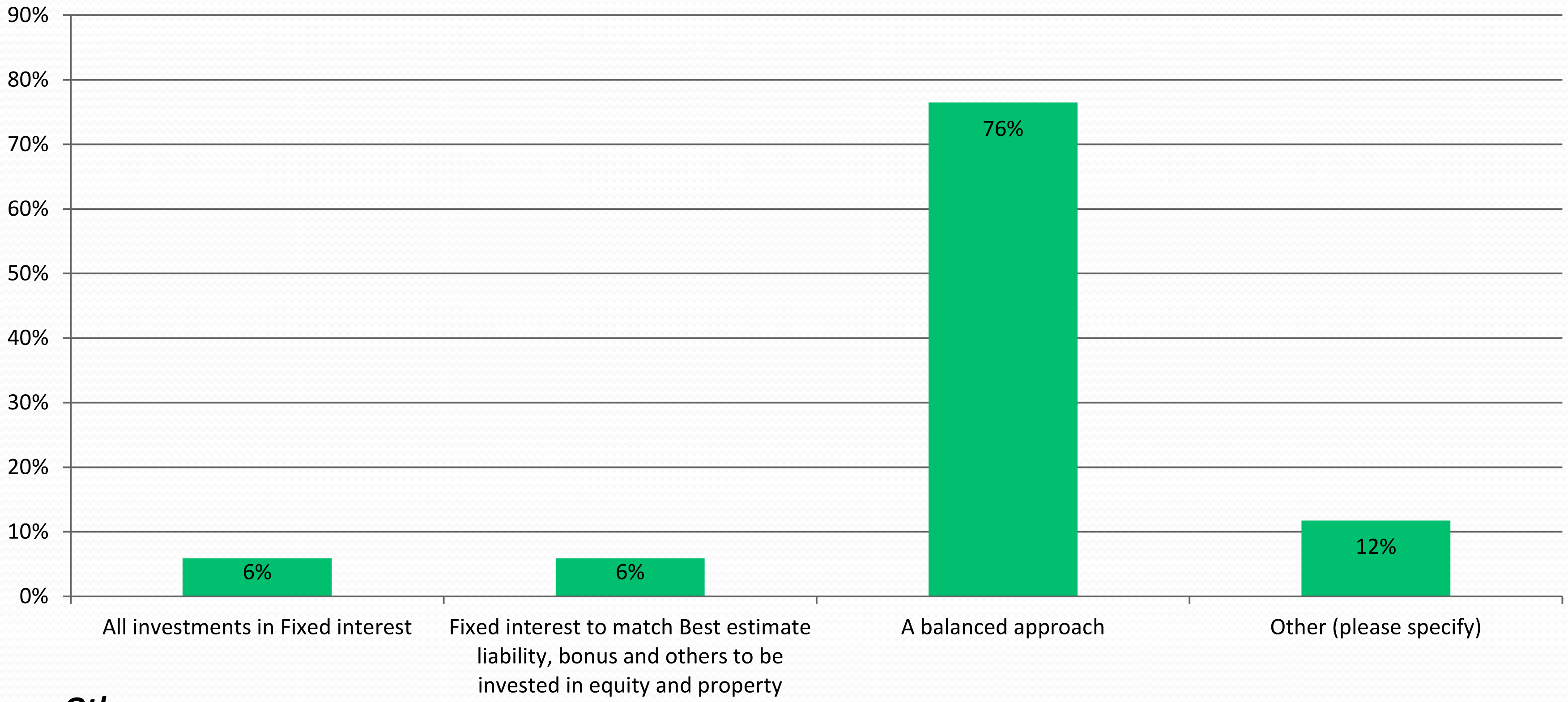
Others:

1. *On weekly basis*
2. *Whenever there is new money to be invested (could be daily) the money will be invested so that asset allocation is in line with the strategy*
3. *They are already matched as assets determine liability*

36. How is the investment strategy of the par portfolio defined in terms of asset classes?

A. All investments in Fixed interest
B. Fixed interest to match Best estimate liability, bonus and others to be invested in equity and property
C. A balanced approach (please specify)
D. Others (please specify)

36. How is the investment strategy of the par portfolio defined in terms of asset classes?



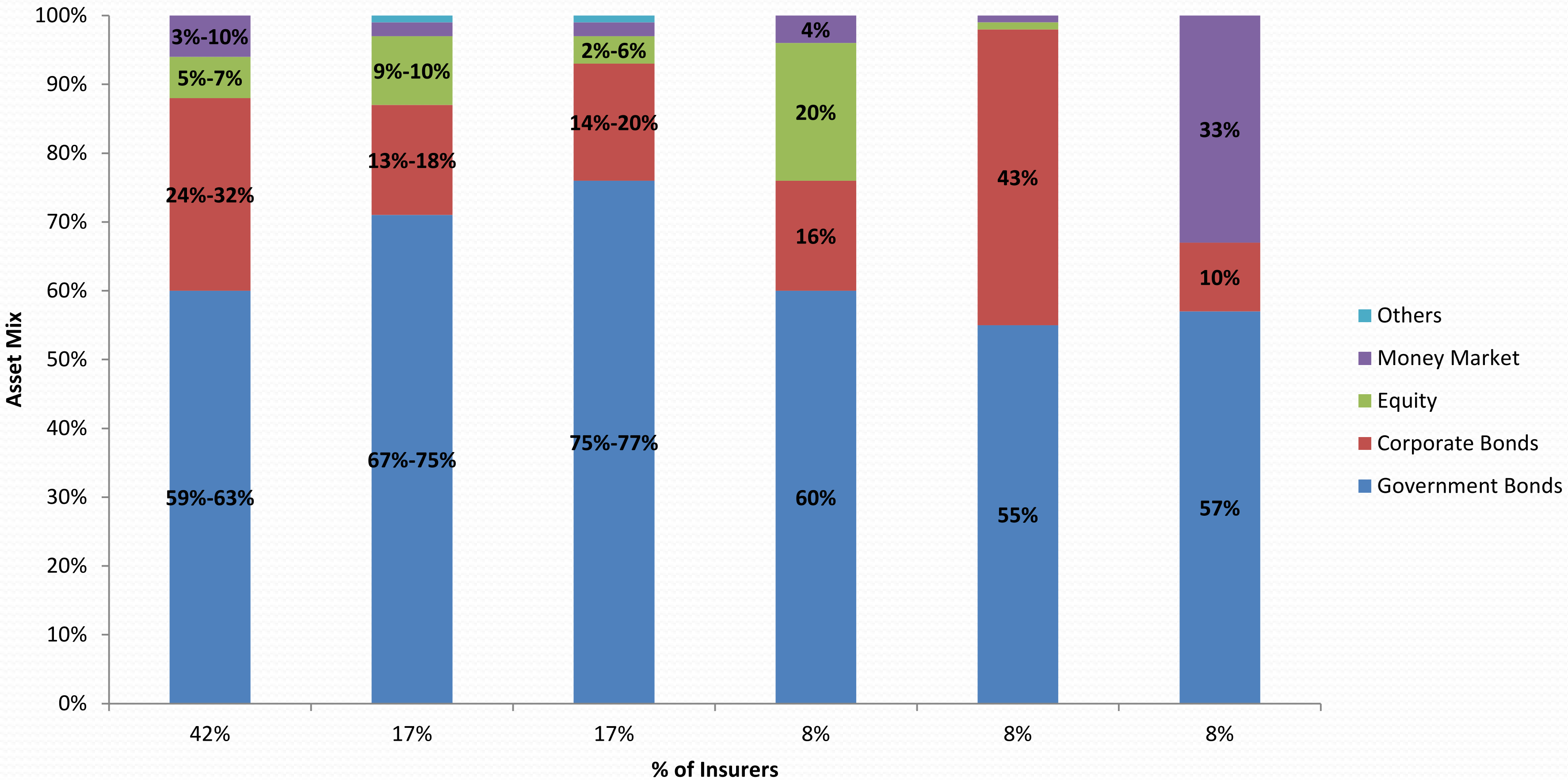
Others:

1. *No such thing defined*
2. *Conservative approach to invest in equity, till the FFA builds up*

37. Please share the actual mix of your investment assets in par fund (total should be 100% - as at 31st March 2017)?

A. Govt Bonds
B. Corp Bonds AAA rated
C. Corp Bonds AA rated
D. Corp Bonds others
E. Equity
F. Property
G. Money Market
H. Others
I. Total

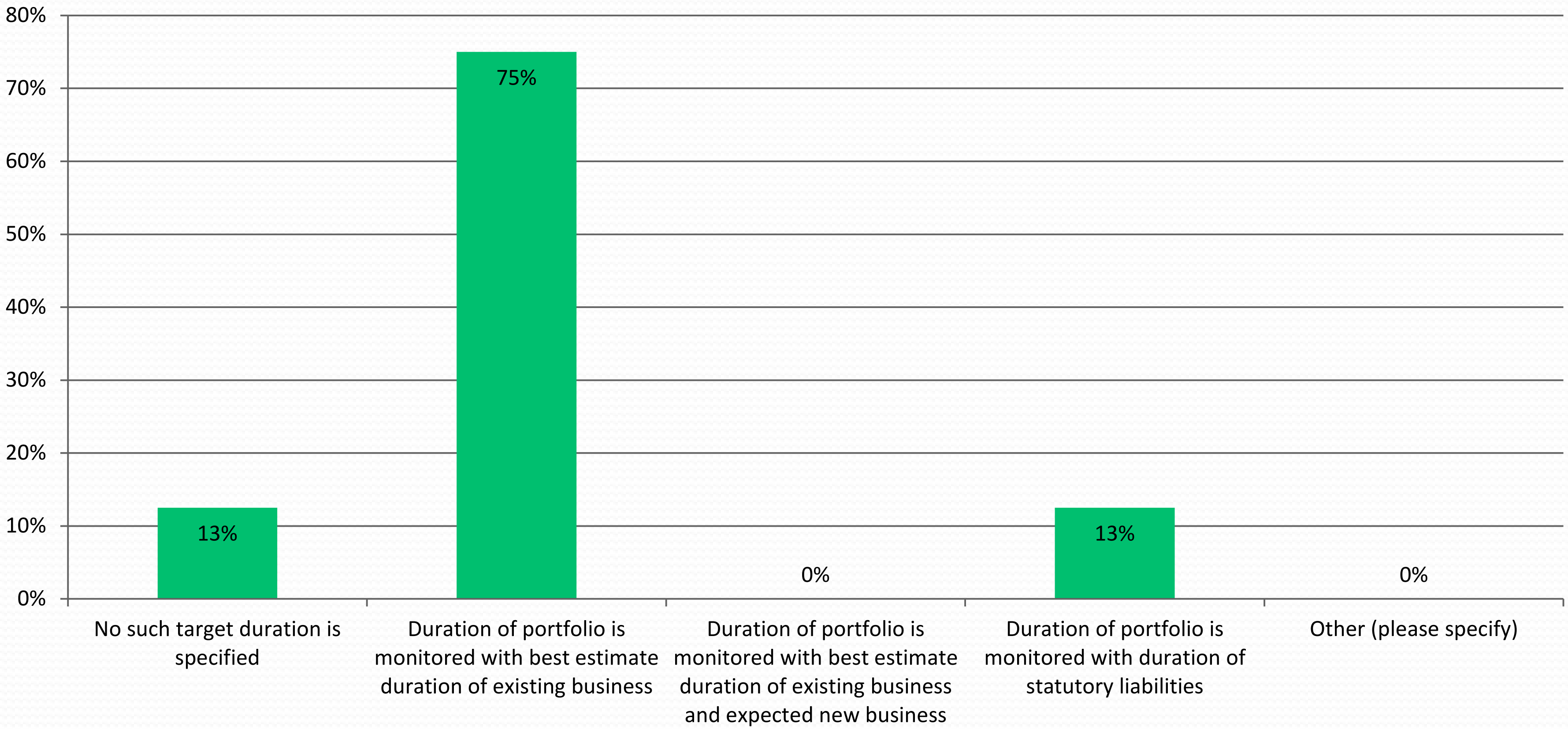
37. Please share the actual mix of your investment assets in par fund (total should be 100% - as at 31st March 2017)?



38. How is the investment strategy of the par portfolio defined in terms of duration?

A. No such target duration is specified
B. Duration of portfolio is monitored with best estimate duration of existing business
C. Duration of portfolio is monitored with best estimate duration of existing business and expected new business
D. Duration of portfolio is monitored with duration of statutory liabilities
E. Others (please specify)

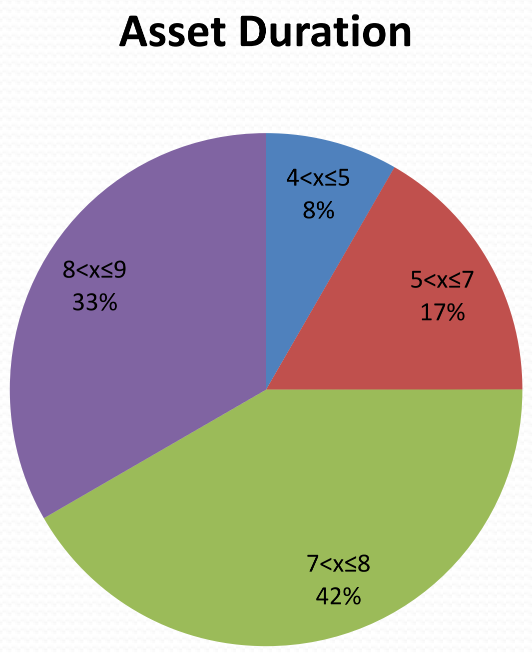
38. How is the investment strategy of the par portfolio defined in terms of duration?

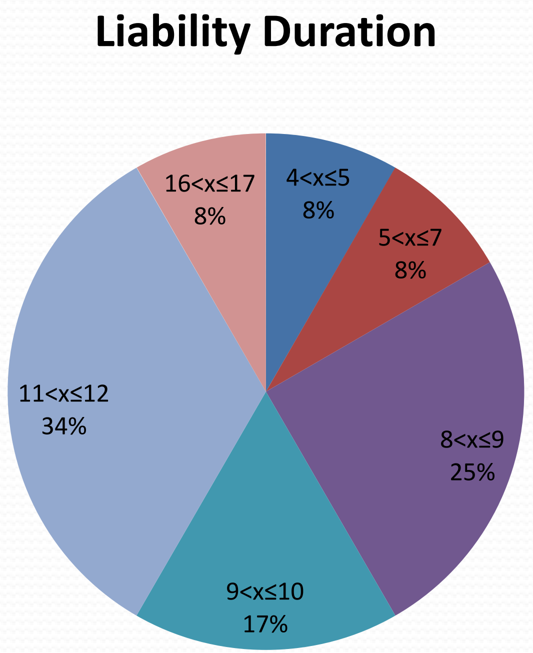


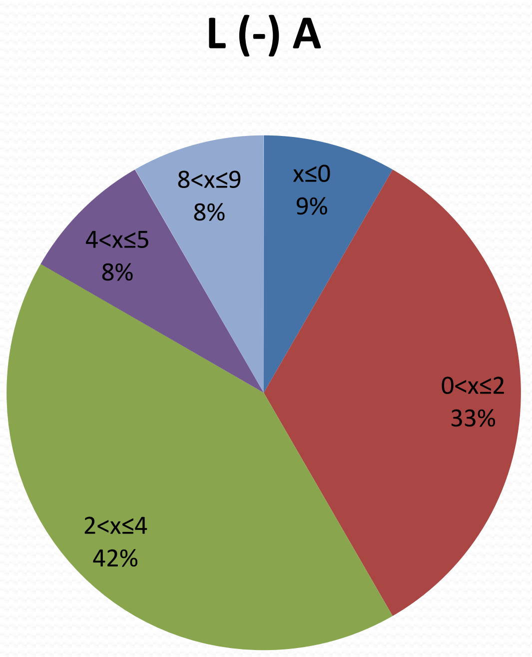
39. Please share the duration of assets and liabilities in par fund

A. Asset duration
B. Liability duration

39. Please share the duration of assets and liabilities in par fund







40. Please share your brief methodology of calculating duration of liabilities for ALM purposes

- ✓ Modified duration for future outgoes, premium income & existing assets are calculated separately using the formula stipulated in the ALM circular of IRDAI
- ✓ Effective duration of best estimate liability which is calibrated from change in liability due to +/- 1% change in interest rate.
- ✓ We calculate Macaulay duration and group liabilities based on that
- ✓ We determine the projected negative liability cash flows (premium less commission, expenses, and benefit payouts) and use the forward rates to compute Macaulay's duration.
- ✓ Economic Duration
- ✓ Macaulay Duration -Weighted average of the present value of cash flows ,where the weights are the time of the cash flows.
- ✓ We manage interest risk using Effective Duration approach

DISCUSSION

DISCUSSION POINTS

- ✓ ROLE OF INDEPENDENT ACTUARY
- ✓ CLARITY OF ROLES AND RESPONSIBILITIES OF WPC
- ✓ WHICH RETURNS TO BE USED FOR ASSET SHARE CALCULATIONS
- ✓ DO WE NEED TO MAINTAIN A SMOOTHENING ACCOUNT BALANCE SEPARATELY FROM FFA
- ✓ DO WE NEED TO SHARE LAPSE/SURRENDER PAID UP PROFITS/LOSSES THROUGH ASSET SHARE
- ✓ WHAT ABOUT RIDER PROFITS / LOSSES
- ✓ WHAT EXPENSES TO BE DEBITED FROM ASSET SHARE
- ✓ DO WE NEED TO MAINTAIN RESERVES ATLEAST EQUAL TO ASSET SHARES
- ✓ SHOULD THERE BE A CONSISTENT APPROACH OF DECLARING REGULAR AND TERMINAL BONUSES ACROSS THE INDUSTRY. SAY, SIMPLE REGULAR BONUSES AND TERMINAL BONUSES ONLY ON SUM ASSURED; TO ENSURE CONSISTENCY AND AVOID ANY MISREPRESENTATION
- ✓ AT WHAT POINT TERMINAL BONUSES SHOULD BE DECLARED FOR SURRENDERS
- ✓ WHAT SHOULD BE THE TARGET ASSET SHARE FOR CALCULATING REGULAR BONUS RATE. I.E. HOW MUCH OF ASSET SHARE SHOULD BE KEPT FOR TERMINAL BONUSES
- ✓ WHAT SHOULD BE THE RIGHT APPROACH TO MANAGE FUND ON A MONTHLY BASIS. REFERENCING PROJECTED LIABILITY OR REFERENCING PREMIUM LESS EXPENSES (AND WHICH EXPENSES, ACTUAL OR BEST ESTIMATE OR PRICING)

THANK YOU