MILLIMAN RESEARCH REPORT

IFRS 17 preparedness

2017 survey feedback

June 2017

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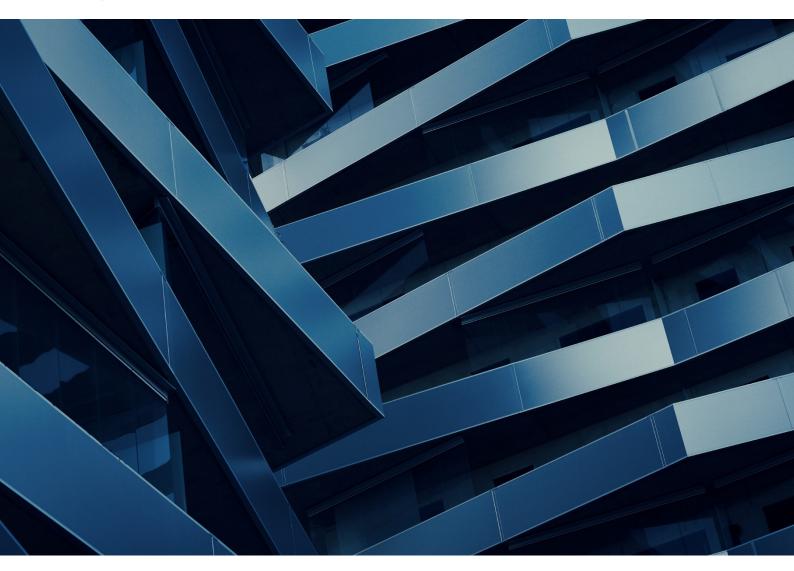






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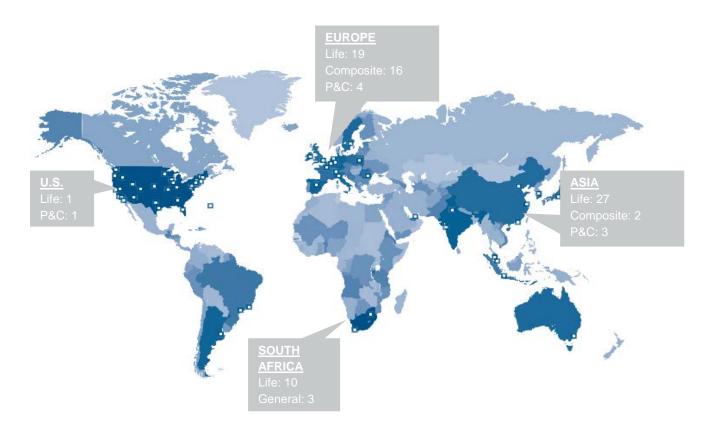
Background and scope of the survey

Milliman conducted this survey to measure the preparedness for International Financial Reporting Standard (IFRS) 17 among insurers. The survey was sent to Milliman's worldwide clients who would be impacted by implementation of the IFRS 17 accounting standard. We received responses from more than 90 companies from across the globe.

The survey's 52 questions are divided into the following subtopics:

- General status of preparedness
- Implementation planning
- Relation with Solvency II/EV
- IT infrastructure
- Assumptions updating process
- Discount rates setting

- Cohort definition
- Methodology of risk adjustment calculation
- Tracking of CSM amortization
- Methods applied toward different lines of business
- Asset valuation choices
- Transition and business issue



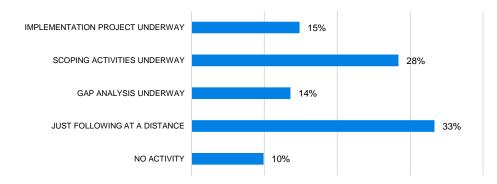
Thank you to each of our survey respondents for taking the time to share their insights and, in so doing, making this survey as comprehensive as possible—we've taken special effort to include any particular concerns respondents mentioned in their survey replies.

Results and analysis

PART 1: STATUS OF PREPAREDNESS

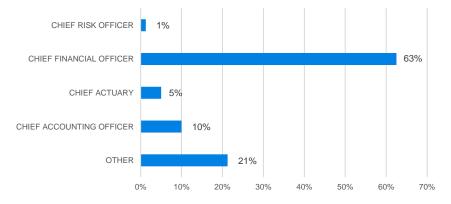
This section of the survey introduces the general questions about participants.

Q5: WHAT IS THE STATUS OF YOUR PREPARATIONS FOR THE IMPLEMENTATION OF IFRS 17?

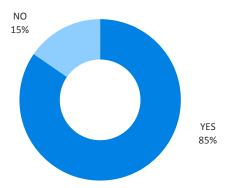


Q6: WHO WILL BE RESPONSIBLE FOR IMPLEMENTING IFRS 17 IN YOUR COMPANY?

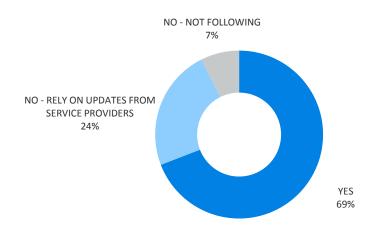
For insurers who selected "Others," more than half anticipated having a combination of chief finance officer, chief actuary, and chief accounting officer managing the project. Others stated that the responsibilities were under considerations.



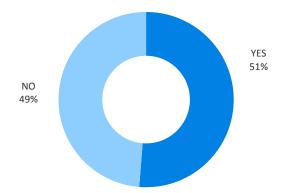
Q7: DO YOU EXPECT TO USE EXTERNAL RESOURCES TO ASSIST IN IMPLEMENTATION?



Q8: IS THERE SOMEONE WITHIN YOUR ORGANIZATION WITH RESPONSIBILITY TO FOLLOW DEVELOPMENTS IN THE IFRS 17 PROJECT AND REPORT INTERNALLY?



Q9: HAS INITIAL TRAINING BEEN CARRIED OUT?



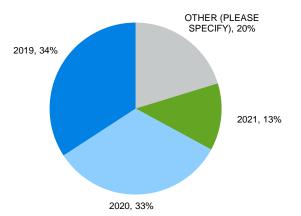
Q10: WHAT DO YOU CONSIDER TO BE THE MAIN CHALLENGES OF IMPLEMENTING IFRS 17?

The general themes of responses summarize to the following points:

- Transition consistency in reporting. Also tight timeline for transitioning.
- Information technology (IT) infrastructure buildup and maintenance. Costly system expansion requirement.
- Resources.
- Data management and availability to perform retrospective calculation.
- Understanding changes to the processes.
- Tight run time and reporting timeline.
- More granular level of accounting/actuarial recognition on product grouping.
- Understanding contractual service margin (CSM)/process/new metrics produced.
- Training of actuarial and accounting area.
- Communication with overseas subsidiaries or with parent company.

Q11: WHAT YEAR DOES YOUR COMPANY PLAN TO BE READY FOR SHADOW/DRY RUNS?

For insurers who selected "Others," almost all of the respondents have yet to define the timeline. Only one respondent indicated the dry run would happen roughly in 2017.



PART 2: IMPLEMENTATION PLANNING

This section of the survey focuses on the resources issue of the implementing IFRS 17 standard.

Q12: WHAT LEVEL OF RESOURCES DO YOU EXPECT TO NEED TO IMPLEMENT IFRS 17 (# OF FTE)?

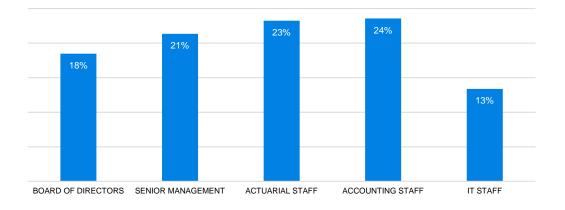
There was a wide range of responses to the question. For those who responded, about 35% said that they have yet to determine the resources required. Over 40% responded that between one and 15 full-time employees (FTEs) would be needed over the span of the projects. Other comments included "the effort would be more than implementation of Solvency II," "the effort would likely by absorbed internally," "the budget will be determined once full specification has been published."

Q13: WHAT BUDGET DO YOU EXPECT TO REQUIRE FOR IMPLEMENTING IFRS 17 (\$)?

There was a wide range of responses to the question. Over 40% of the participants have yet to determine the budget. For those who responded, the budget quoted ranges from EUR 100,000 to over EUR 100 million. There were two respondents who also replied the process would be absorbed by the current team and no additional budget had been assigned.

Q14: WHAT PERCENTAGE OF THE ABOVE RESOURCES DO YOU EXPECT TO BE DEDICATED TO ACTUARIAL COMPONENTS OF IMPLEMENTATION?

There were three very distinctive answers to the question. About 50% of the participants who responded said that more than 40% of the sources would be dedicated to actuarial components of implementation. Close to 30% of the respondents had yet to determine the resources. The remainder believed that at most 30% of the effort would be required by actuarial components. The responses did not vary by geographic regions.

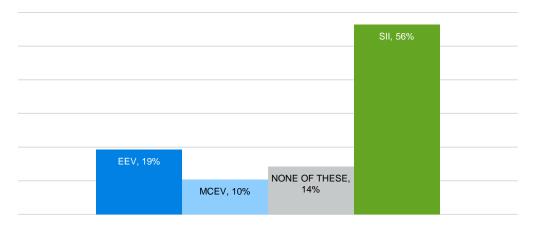


Q15: WHO WITHIN YOUR ORGANIZATION WILL NEED SOME LEVEL OF TRAINING WITH REGARDS TO IFRS 17?

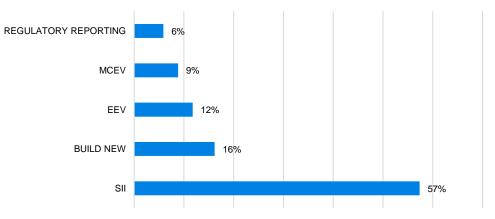
PART 3: SOLVENCY II/EV

This section of the survey questions the reliance of Solvency II/Embedded Value (EV) infrastructure for new IFRS 17 reporting.

Q16: DO YOU REPORT UNDER SOLVENCY II OR EMBEDDED VALUE?

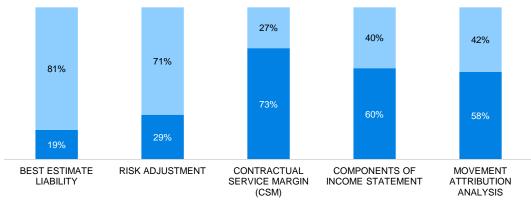


Q17: IF YES, DO YOU PLAN TO LEVERAGE THESE CALCULATION PLATFORMS FOR IFRS 17?



PART 4: IT INFRASTRUCTURE

Q18: DO YOU PLAN TO ADAPT EXISTING VALUATION PLATFORMS TO PERFORM THE FOLLOWING IFRS 17 CALCULATIONS?

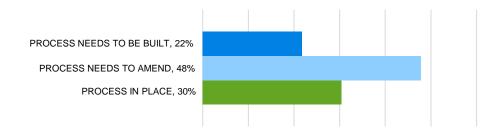


NEW PLATFORM REQUIRED
USE EXISTING PLATFORMS

PART 5: ASSUMPTION UPDATE PROCESS

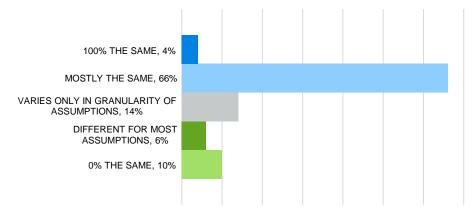
This section of the survey questions the reliance of assumptions from Solvency II/EV reporting.

Q19: UNDER IFRS 17, ALL ASSUMPTIONS FOR THE BEST ESTIMATE LIABILITY WILL NEED TO BE CURRENT AS OF THE VALUATION DATE. DO YOU HAVE A PROCESS IN PLACE TO PRODUCE CURRENT ASSUMPTION SETS AT EACH VALUATION DATE OR WILL THIS PROCESS NEED TO BE BUILT?



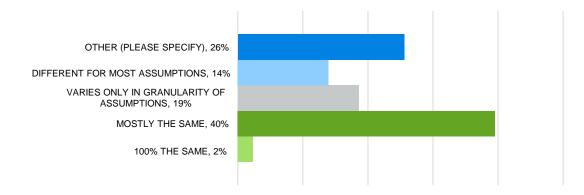
Q20: IF YOU REPORT UNDER SOLVENCY II, DO YOU EXPECT THE IFRS 17 ASSUMPTIONS TO BE THE SAME AS UNDER SOLVENCY II?

For insurers who selected "0% the same," almost all indicated that they do not report on Solvency II or it was not applicable.



Q21: IF YOU REPORT UNDER EMBEDDED VALUE, DO YOU EXPECT THE IFRS 17 ASSUMPTIONS TO BE THE SAME AS UNDER EMBEDDED VALUE?

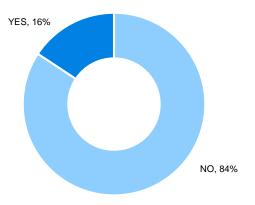
For insurers who selected "Other," almost all indicated that they do not report on Embedded Value or the question was not applicable.



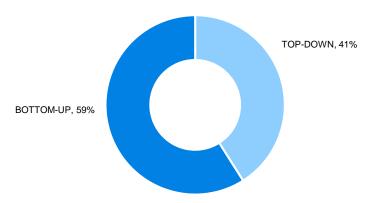
PART 6: DISCOUNT RATES

This section of the survey questions the assumption setting on discount rates.

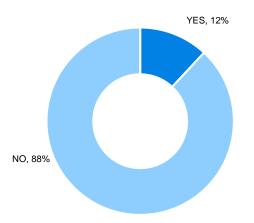
Q22: DISCOUNT RATES WILL BE NEED TO BE DERIVED THAT REFLECT THE CHARACTERISTICS OF THE LIABILITIES. HAS YOUR COMPANY DETERMINED THE PROCESS IT WILL USE TO DETERMINE THE DISCOUNT RATES?



Q23: WILL IT BE A "BOTTOM-UP" OR "TOP-DOWN" APPROACH?

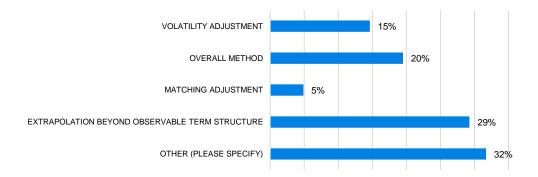


Q24: HAVE YOU DETERMINED HOW YOU WILL DERIVE DISCOUNT RATES BEYOND THE OBSERVABLE MARKET YIELD CURVE?



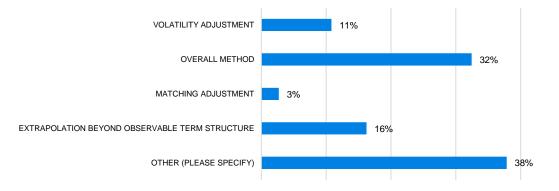
Q25: IF YOU REPORT UNDER SOLVENCY II, WHAT DIFFERENCES DO YOU EXPECT IN DERIVING THE DISCOUNT RATES?

For insurers who selected "Other," almost all have indicated they have yet to determine the approach. One respondent replied that no significant change is expected.



Q26: IF YOU REPORT UNDER EMBEDDED VALUE, WHAT DIFFERENCES DO YOU EXPECT IN DERIVING THE DISCOUNT RATES?

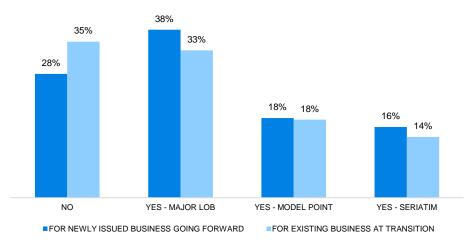
For insurers who selected "Other," almost all have indicated they have yet to determine the approach or that the question is not applicable. Some respondents replied that internal study is underway.



PART 7: COHORT DEFINITION

This section of the survey focuses on cohort definition for CSM calculation.

Q27: WHEN DEFINING THE INITIAL CSM, DO YOU EXPECT THAT YOU WILL HAVE MORE THAN THREE COHORTS PER YEAR OF ISSUE FOR EACH TYPE OF BUSINESS?

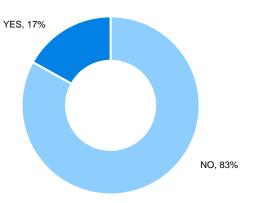


Q28: WILL YOUR CURRENT VALUATION SYSTEM SUPPORT THIS LEVEL OF COHORTS?



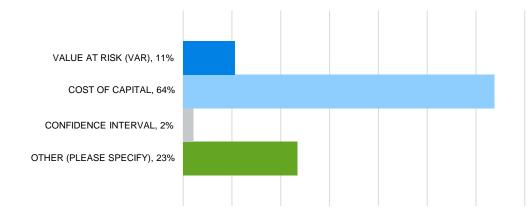
PART 8: RISK ADJUSTMENT CALCULATION This section of the survey focuses on the risk adjustment.

Q29: HAVE YOU DEFINED A METHODOLOGY THAT YOU EXPECT TO USE TO DETERMINE THE RISK ADJUSTMENT?

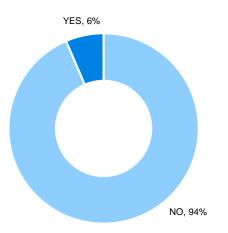


Q30: SELECT METHOD YOU EXPECT TO USE.

For respondents who selected "Other," a majority of the insurers have indicated the method is under consideration. One respondent mentioned the use of deterministic prudence margin.



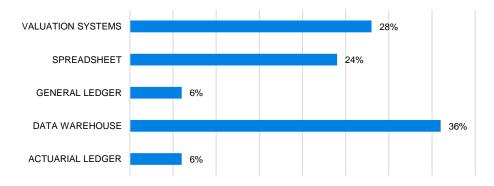
Q31: HAVE YOU DETERMINED A WAY TO ARRIVE AT CONFIDENCE LEVEL FOR RISK MARGIN?



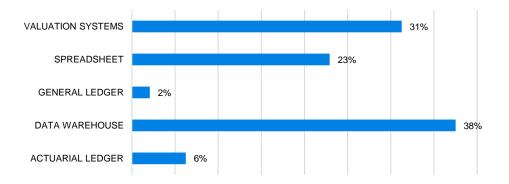
PART 9: CSM AMORTIZATION

This section of the survey focuses on the tracking of contract service margin amortization.

Q32: DO YOU PLAN TO TRACK THE AMORTIZATION OF THE CSM IN YOUR VALUATION SYSTEMS OR OUTSIDE IN, FOR EXAMPLE, A SPREADSHEET ENVIRONMENT?



Q33: IN WHICH SYSTEMS WILL YOU TRACK NOTIONAL NEGATIVE CSM AMOUNTS?



PART 10: METHODS AND CHOICES

This section of the survey focuses on the approaches insurers intend to adopt when complying with IFRS 17.

Q34: FOR WHICH LINES OF BUSINESS DO YOU ANTICIPATE USING OTHER COMPREHENSIVE INCOME (OCI) FOR REFLECTING CHANGES IN DISCOUNT RATES?

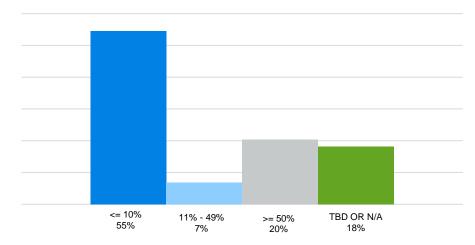
Most respondents indicated that they have yet to evaluate the use of OCI. Some respondents noted that it will depend on their hedging policies after evaluating the impact of implementing IFRS 9.

Q35: FOR WHICH LINES OF BUSINESS DO YOU ANTICIPATE APPLYING THE VARIABLE FEE APPROACH?

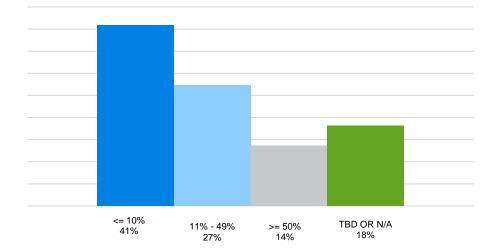
There was a wide range of responses. Participants anticipated applying the variable fee approach on products such as: unit-linked, variable annuity, interest-sensitive, or participating contracts. Close to 20% of the respondents had yet to determine the resources. The remainder believed that the approach was not applicable to their businesses. The responses did not vary by geographic regions.

Q36: WHAT PORTION OF YOUR BUSINESS DO YOU EXPECT TO APPLY THE FOLLOWING METHODS?

Eighteen percent of the respondents answered that the methods are still under consideration or the methods are not applicable. Another 18% is also represented as to be determined (TBD) or not applicable (N/A) in the following charts:

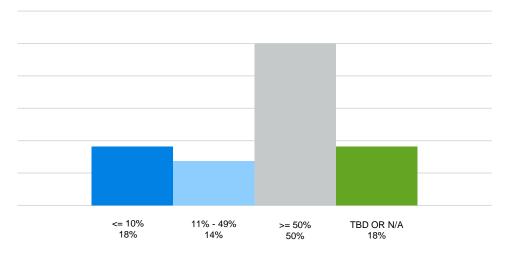


Premium Allocation Approach

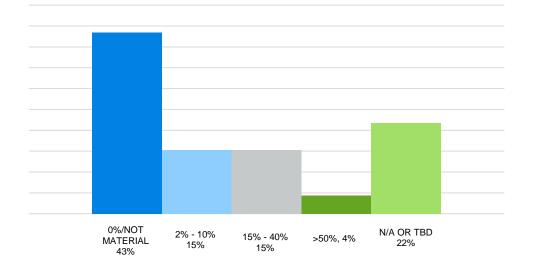


Variable Fee Approach

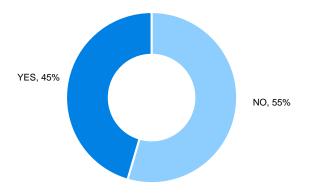
General Model



Q37: WHAT PORTION OF YOUR BUSINESS WILL YOU NEED TO UNBUNDLE SERVICE OR INVESTMENT COMPONENTS SO THEY CAN BE APPROPRIATELY VALUED USING IFRS STANDARDS OTHER THAN IFRS17?



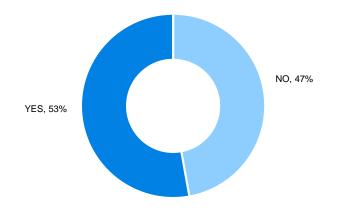
Q38: IF YOU CURRENTLY REPORT ON AN IFRS BASIS, WILL YOU NEED TO RE-DETERMINE SIGNIFICANT INSURANCE RISK FOR ANY OF YOUR BUSINESS?



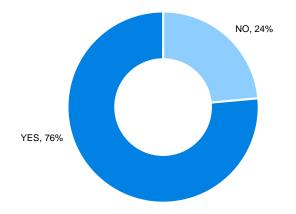
PART 11: ASSET VALUATION CHOICES

This section of the survey focuses on the adoption of IFRS 9 for asset reporting.

Q39: DO YOU ANTICIPATE CHANGES TO EXISTING ASSET VALUATION CATEGORIES WITH IFRS 17 IMPLEMENTATION?



Q40: DO YOU PLAN TO DEFER ADOPTION OF IFRS 9 UNTIL ADOPTION OF IFRS 17?

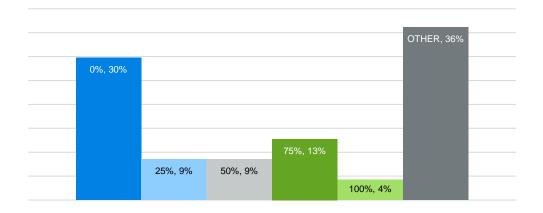


PART 12: TRANSITION: FULL RETROSPECTIVE

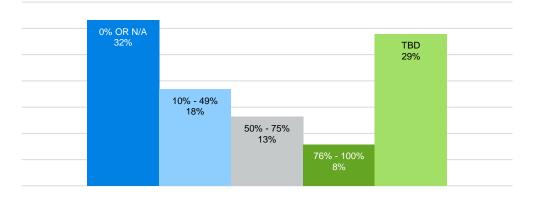
This section of the survey focuses on the approach to apply when transitioning to IFRS 17 reporting.

Q41: WHAT PORTION OF BUSINESS IN FORCE DO YOU BELIEVE YOU WILL BE ABLE TO APPLY FULL RETROSPECTIVE APPROACH (BASED ON NUMBER OF CONTRACTS)?

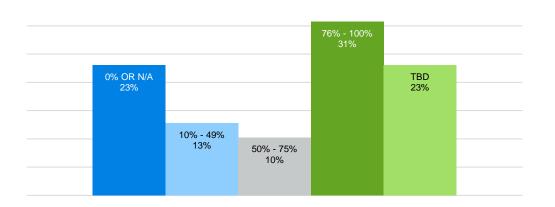
For respondents who selected "Other," a majority of the respondents have indicated the percentage is still under consideration. One respondent indicated 90% of the business will be applied in a full retrospective approach. Another two respondents mentioned small percentages, but not 0%.



Q42: WHAT PORTION OF BUSINESS IN FORCE DO YOU BELIEVE YOU WILL BE ABLE TO APPLY MODIFIED RETROSPECTIVE APPROACH (BASED ON NUMBER OF CONTRACTS)?



Q43: WHAT PORTION OF BUSINESS IN FORCE DO YOU BELIEVE YOU WILL BE ABLE TO APPLY FAIR VALUE APPROACH (BASED ON NUMBER OF CONTRACTS)?



Q44: HOW WILL YOU DEFINE FAIR VALUE FOR THAT PORTION OF THE BUSINESS?

A majority of the respondents who answered the question said that the definition of fair value is still to be determined. Some respondents mentioned that they would follow Market Consistent Embedded Value (MCEV) or European Embedded Value (EEV). One respondent answered that cash surrender value would be adopted. Another respondent said the International Accounting Standard 39 (IAS39) approach would be taken.

Q45: FOR HOW MANY YEARS DO YOU BELIEVE YOU WILL BE ABLE TO DO FULL RETROSPECTIVE APPROACH?

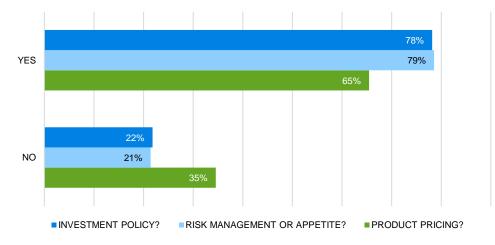
Close to a quarter of the respondents indicated that years required are still being investigated. Over a third of the respondents, 35%, replied that they would be able to apply full retrospective approach in between one and five years. Twenty-one percent of the respondents replied that they would be able to apply the approach in between seven and 10 years.

One respondent concluded that the years would vary by products. Another respondent indicated it would be able to apply full retrospective approach in between 20 and 35 years, depending on the administration system.

PART 13: BUSINESS ISSUES

This section of the survey focuses on the future impact of IFRS 17 reporting to current business.

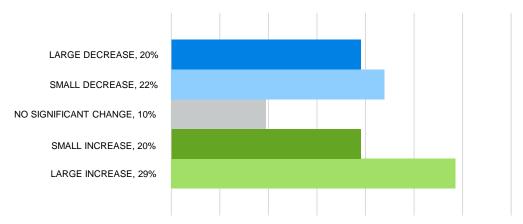




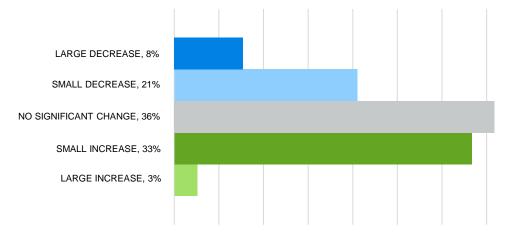
Q47: WHICH LINES OF BUSINESS, IF ANY, DO YOU BELIEVE WILL BE LESS ATTRACTIVE UNDER IFRS 17?

While most respondents did not yet have views on which products would be less attractive, those few that did respond indicated that products with minimum interest rate guarantees would be less attractive.

Q48: WHAT IMPACT DO YOU EXPECT TO THE OPENING IFRS EQUITY BALANCE?



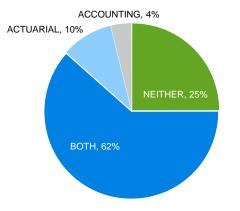
Q49: WHAT IMPACT DO YOU EXPECT TO ONGOING LEVEL OF IFRS EARNINGS?



Q50: WHAT PORTION OF YOUR INVESTED ASSETS ARE CURRENTLY HELD AT MARKET VALUE?

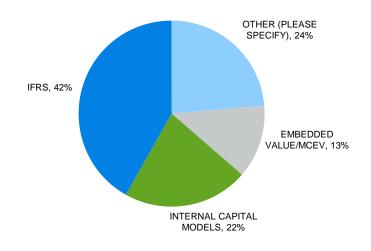
Of the 37 responses received, five indicated 50% or less of the assets held are at market value, another five responded holding 51% to 70% and the remainder were holding in excess of 70% (mostly above 90%).

Q51: DO YOU PLAN TO INVEST IN NEW ACCOUNTING OR ACTUARIAL SYSTEMS DURING IMPLEMENTATION OF IFRS 17?



Q52: WHAT REPORTING BASIS WILL PRIMARILY DRIVE YOUR DAY-TO-DAY DECISION MAKING AFTER IMPLEMENTATION OF IFRS 17 AND IFRS 9?

For respondents who selected "Other", they were either investigating the issue or included a combination of the reporting bases listed.



How Milliman can help

An IFRS 17 implementation project should definitely be on the agenda of insurance companies reporting under IFRS. With our international exposure and diverse experience, Milliman is well-suited to accompany you along your IFRS 17 implementation journey. In particular, we are ready to provide specialist assistance in the following areas:

- Multi-term planning for IFRS 17 implementation
- Development of IFRS 17 methodologies and internal standards
- Advice relative to international best practice
- Gap analysis and readiness monitoring
- Assumption setting
- Development of performance measures
- Financial impact analysis
- Analysis of interation between IFRS 17 and IFRS 9
- Training courses for board and staff members



- Development of models using MG-ALFA® (in-house modelling toolkit), Prophet and other projection/valuation tools
- Development of run schedules to generate the inputs for the income statement, balance sheet and disclosures
- Model testing and documentation
- Data validations
- Development of data interface into project software



REPORTING

- Assistance with data warehouse solutions and reporting engines
- Reconciliation of SAM, EV and other IFRS calculations with IFRS 17 calculations
- Workflow management
- Validation of outputs
- Assessing the impact of the Standard on profitability and opening equity
- Development of dashboards and RAG-tables for high-level monitoring
- Assistance with disclosures and stakeholder communication



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milliman.com/IFRS

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