

Capital modelling – General insurance market overview

Results from our market survey

March 2022



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Capital modelling - General insurance market overview



Introduction



Bharat Raj General Insurance Actuarial and Risk for Grant Thornton UK LLP

We are delighted to present the results from Grant Thornton's 2022 Capital Modelling Survey for general insurers.

We all too often hear events being described as being rare, extreme, something that occurs once in a career or once in a lifetime. The strange thing is that for the first time, at least in my lifetime, I can rightly say that we are living through times and changes that are unprecedented in living memory. Even stranger still, is the fact that these uneasy times are not simply the result of one or two underlying causes, we are witnessing the confluence of a number of globally significant shifts acting against our long held understanding of the world.

Foremost on our minds and in our memories is of course the pandemic. The scale of the destruction and tragedy it wrought upon our communities defies comprehension, and at the time of this report, the pandemic is not quite done with us yet. Far more frightening still, is the dual threat of climate change and species loss and the impact this expected to have on our planet's capacity to sustain life as we know it. Alongside these threats, we are also in a period of unprecedented political uncertainty across many leading global economies, and a rapid transition of global economic and military dominance away from its long standing custodians.

When we published our previous modelling survey, Brexit was probably the highest ranked "known unknown" on our risk registers. In comparison to the issues we see ahead of us today, Brexit is unlikely to register on the same scale. Modelling the current risk environment is easily the most challenging it has ever been since the advent of capital modelling.

In this survey, we took the opportunity to ask insurers and reinsurers about their capital modelling resources, how they feel about their capital modelling capabilities and process, the key challenges they are facing and the ways in which they are looking to improve. In addition, we have also taken this opportunity to ask them about related activities and recent market and global developments that will no doubt affect modelling teams, in particular, Brexit, climate risk modelling and IFRS 17.

We are enormously grateful to those people who took the time and trouble to complete the survey. It is their efforts that have rendered this document meaningful.

Whether or not you were one of those individuals, we hope that you find this report interesting, instructive and thought-provoking.

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Key findings

48%

of the survey respondents are Lloyd's managing agencies, 44% are general insurance companies and 7% are composites Igloo and ReMetrica still appear to be the most widely used modelling platforms, with 30% and 27% of participants using these respectively.

The Tyche modelling platform has seen an increase in popularity with 23% of our respondents using this platform; an increase from 14% in 2020 and 0% in 2017.

96%

of respondents said that they maintain a formal model validation process. The respondents that do not have a formal validation process, use the Solvency II standard formula for calculating their capital requirements The average number of capital modelling team members per legal entity has increased by 26% from 1.9 in 2020 to 2.4 in 2022.

The frequency of model updates appears to have increased. On a regulatory basis, respondents running their models quarterly has increased from 29% to 38% meanwhile respondents running their models annually has decreased from 13% to 5%.

63%

of respondents use a full internal model to calculate their Solvency II regulatory capital requirements and 22% of respondents use a partial internal model Respondents running less than 50,000 simulations per model run has decreased from 18% in 2020 to 0% this year. This year, 56% of our respondents run between 100,000 and 199,999 simulations per model run and 20% of our respondents run 200,000 simulations or more.



68%

of the survey participants said that they have made at least one significant model change within the past two years 18% of recent major model changes involved a model platform change. 36% increased functionality or sophistication and 25% improved reporting capabilities.

40% of our respondents said that their major model change process is fully embedded within their business-as-usual process. On the other hand, 24% of our respondents' major model change applications are undertaken on a fully ad-hoc basis.

44%

of participants see their model or modelling process requiring re-engineering in the next three years 52% of our respondents said that they will be reporting under IFRS 17, 77% of which will be using the capital model as part of their reporting process.

14% have seen an increase in their workload due to the addition of new legal entities.

64%

of participants see implementing model improvements as a key priority for their business over the next 12 months Only 16% of respondents include an explicit of allowance for climate risk in their capital model. Of the respondents that do not currently allow for climate risk, 62% plan to do so and 38% do not.

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Detailed results

Composition of respondents

Type of company

A wide range of insurance entities were invited to participate in this survey. As shown in Figure 1, 48% of our respondents were from Lloyd's managing agencies while 44% were from general insurance companies. A further 7% were from composites.

Please note that the composition of respondents has changed from our previous survey, conducted in 2020. The majority of respondents in our 2020 survey were general insurance companies (60%), followed by Lloyd's managing agencies (31%).

Role within organisation

Fig 2: Role within organisation

Responses were received from individuals working in a range of roles including head of capital, chief actuary and chief risk officer.

This year 33% of our respondents were heads of capital. Approximately a fifth (19%) of all respondents were chief actuaries or heads of actuarial functions, whilst another 19% held other actuarial roles. The remaining responses came from capital modelling managers, CROs or heads of risk.

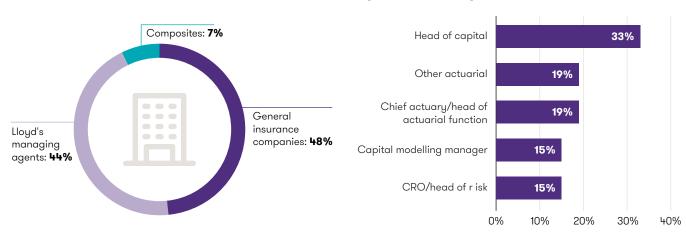


Fig 1: Type of company

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Size of company

We have grouped respondents into categories based on their size.

We have done this on two bases, the first of which is net premium income. 19% of respondents had net premium income of less than £200 million, 48% had between £200 million and £1 billion and 34% had greater than £1 billion.

When compared to our previous survey, we have seen a decrease in the proportion of respondents with a net premium income of £1 billion and below, from 77% to 67% of respondents. There has been an offsetting increase in the proportion of respondents with a net premium income greater than £1 billion, from 23% to 34%. We have also grouped respondents by the level of their Solvency II net technical provisions.

26% of respondents had net technical provisions of less than £200 million, 37% between £200 million and £1 billion and 38% greater than £1 billion.

In our 2020 survey, the same percentage of respondents had net technical provisions of less than £200m, whilst the proportion of respondents with between £200 million and £1 billion in provisions and with over £1 billion in provisions were 46% and 28% respectively.

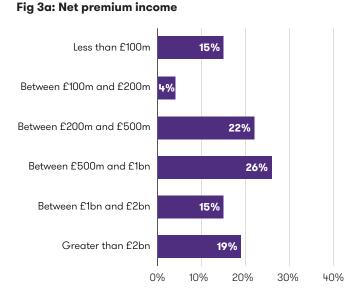


Fig 3b: Net technical provisions



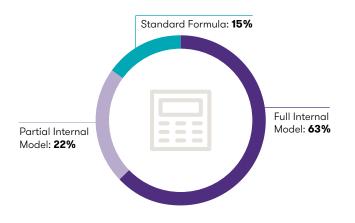
Calculation of Solvency Capital Requirement

Method for calculation of Solvency Capital Requirements

63% of respondents use a full internal model to calculate their Solvency Capital Requirements, while 22% of respondents use a partial internal model. The remaining 15% of respondents use the Standard Formula. None of the respondents to this year's survey use Undertaking-Specific Parameters (USPs) in their Standard Formula calculation.

In comparison, our previous survey found that 60% of respondents were using a full internal model, 11% were using a partial internal model and 29% were opting for the Standard Formula (of which, 3% were using the Standard Formula with USPs).

Fig 4: Method of calculation of Solvency Capital Requirements

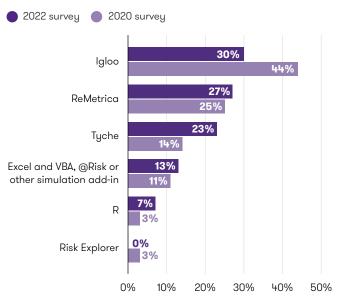


Modelling platforms used

We asked insurers which modelling platforms they use for running their capital model. The most popular platform amongst our respondents is Igloo, with 30% of respondents using it. The top three platforms are Igloo (30%), ReMetrica (27%) and Tyche (23%).

Figure 5 shows a comparison of responses to our previous survey, which demonstrates that use of Tyche has increased, whilst the proportion of respondents using Igloo has reduced.

Fig 5: Modelling platforms used



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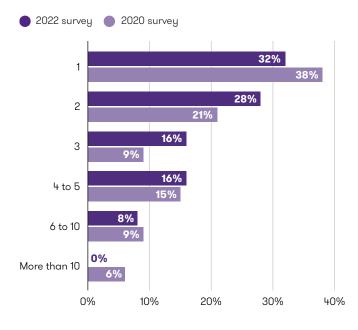
Scope and resources

Number of legal entities covered by capital modelling team

The number of legal entities for which our respondents perform capital modelling varies widely. 92% of respondents cover five or fewer legal entities within their capital modelling function, with 32% of our respondents covering one legal entity, 28% covering two legal entities, 16% covering three legal entities and 16% covering between four and five legal entities. At the other extreme, 8% of our respondents cover more than six legal entities within their capital modelling function. None of our respondents cover more ten legal entities.

In comparison to our 2020 survey, driven by Brexit, there has been a reduction in the number of participants that cover one legal entity and an increase in the participants that cover two legal entities. There has also been a reduction in the proportion of participants that cover more than 10 legal entities.

Fig 6: Number of legal entities covered by capital modelling

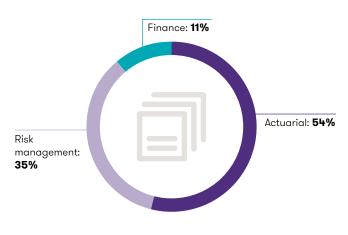


Reporting line of the capital modelling team

We asked insurers about the business function that their capital modelling team reports into. Among our respondents, the main business functions that the capital modelling teams report into are the actuarial function (54%) and the risk management function (35%). For 11% of our respondents, the capital modelling teams report into the finance function.

This is a similar to the result from our previous survey.

Fig 7: Business function the capital modelling team reports into





Size of the team

We asked insurers about the size of their actuarial function (including the capital modelling team).

Our respondents' actuarial functions vary considerably in size. 32% of our respondents have between one and ten people in the team, 28% of our respondents have between 11 and 20 people in the team and the remainder, 40% of respondents, have over 20 in their teams. This represents a upwards trend in the actuarial team size by comparison to our 2020 survey, where only 33% of respondents had more than 20 people in their actuarial team with the main increase in team size for over 50, from 3% to 20%.

In comparison to our previous survey, the most significant change has been in the proportion of participants with more than 50 people in the actuarial function, which has increased from 3% to 20%. Our respondents' capital modelling teams are generally of quite a similar size, with 56% of respondents having between one and five people in their capital modelling team. 36% of our respondents have between six and ten people, whilst only 8% of our respondents have more than ten people in their capital modelling team. In our 2020 survey, 76% of respondents had between one and five people in their capital modelling team and only 24% had more than six people. This implies that the size of capital modelling teams has, on average, increased, as shown by the shift to larger teams.

Fig 8a: Size of the actuarial function (including the capital modelling team)

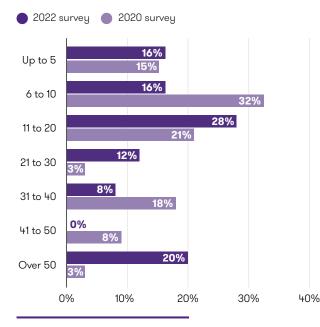
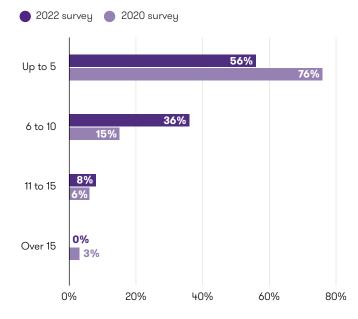


Fig 8b: Size of the capital modelling team



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We compared the number of capital modelling team members per legal entity covered across our respondents. On average, there are 2.4 team members per legal entity. This represents an increase since our previous surveys where there were approximately two team members per legal entity.

We also calculated the 25th and 75th percentiles of the number of capital modelling team members per legal entity and compared this to our results from our previous surveys. The 25th percentile shows a similar trend to the average number of team members since 2017 however the 75th percentile seems to be narrowing towards the average.

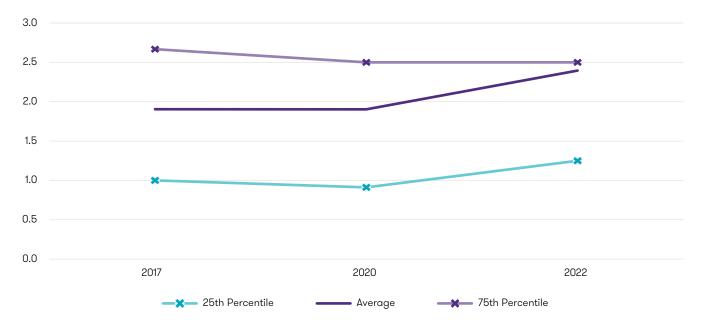


Fig 8c: Number of capital modelling team members per legal entity

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The capital modelling process

Frequency of model runs (regulatory capital requirements)

We asked insurers how often they run their model to calculate their capital requirements. Of the companies who use their models to calculate regulatory capital requirements, 38% run their model quarterly, 52% bi-annually and 5% annually.

When compared to our previous survey, the frequency of regulatory capital runs amongst respondents has increased quite noticeably. In particular, the proportion of respondents running the capital model quarterly and monthly has increased, and the proportion running the model annually have decreased.

Frequency of model runs (economic capital requirement) Of respondents who run their model to calculate economic capital, 12% run the model annually, 41% bi-annually, 35% quarterly, 12% monthly.

When compared to our previous survey, the frequency of economic capital runs amongst respondents appears to have increased slightly. In particular, the proportion of respondents running the capital model monthly has increased, however, this is partially offset by the decrease in the proportion of participants running the model quarterly.

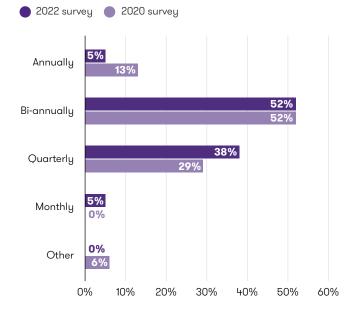
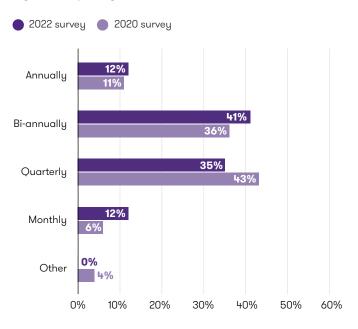


Fig 9a: Frequency of regulatory model runs

Fig 9b: Frequency of economic model runs



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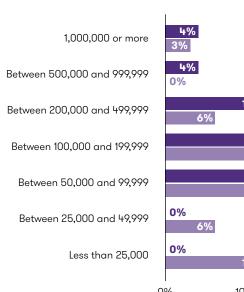
Number of simulations

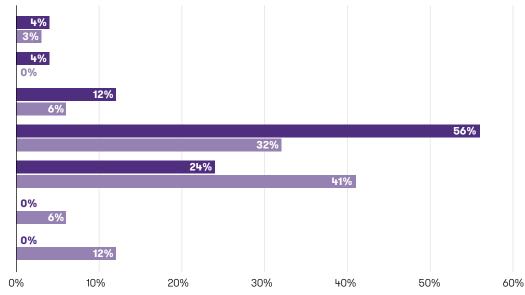
The number of simulations that insurers use for calculating the final capital requirement calculation varied between our respondents. This year, 80% of respondents perform between 50,000 and 200,000 simulations while the remaining 20% of our respondents use 200,000 or more simulations.

When compared with the results of our 2020 survey, we have seen an overall increase in the number of simulations performed by respondents. Most notably, the proportion of respondents using less than 50,000 runs reduced from 18% to 0%. Also, the proportion of respondents performing 100,000 or more simulations has increased from 41% in 2020 to 76% in 2022. These increases can be potentially attributed to enhanced computing power, more efficient models and faster modelling platforms.



Fig 10: Number of simulations per model run





²⁰²² survey 2020 survey

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Automation of inputs

We asked our respondents to describe how automated the various inputs into their capital model are.

Based on the responses we received, the feed into the capital model that is the most manual is the reinsurance programme with 76% of our respondents considering the feed to be "mainly manual" or "automated with significant manual intervention". Other areas that are highly manual include the operational risks and reserve risk inputs into the capital model. The areas considered by our respondents to be the least manual are the feeds from catastrophe models, the economic scenario generator and non-cat underwriting risk. Major modelling changes which improve model platforms and increase functionality is expected to increase automation in coming years.

Fig 11: Automation of inputs

Mainly manualAutomated with significant I	manual i	nterventio	en 🔵	Automated Fully autor		ome r	nanual in	terventi	ion					
Reserving	38%				29%				25%			8%		
Non-cat underwriting risk			33%			21%			38%			8%		
Catastrophe model outputs	4%	2	22%			39%			35%					
Non-model catastrophe risks			45%				20%			25%	25%		10%	
Business plan			39%			17%			;	30%		13%		
Expenses			46%				13%			21%		21%		
Reinsurance programme		63%							13%	13%		1	B%	
Investment portfolio			41%				18%			3%	18%			
Operational risks			57%			1;			3% 17%		6 13%			
Reinsurance credit risk			55%					9%		23%		14%		
Other credit risk			48%			9%		30%		13%		6		
Economic scenario generator		3	32%			32%				32	%		4%	
	0%	10%	20%	30%	40%)	50%	60%	70)% 81	0%	90%	100	

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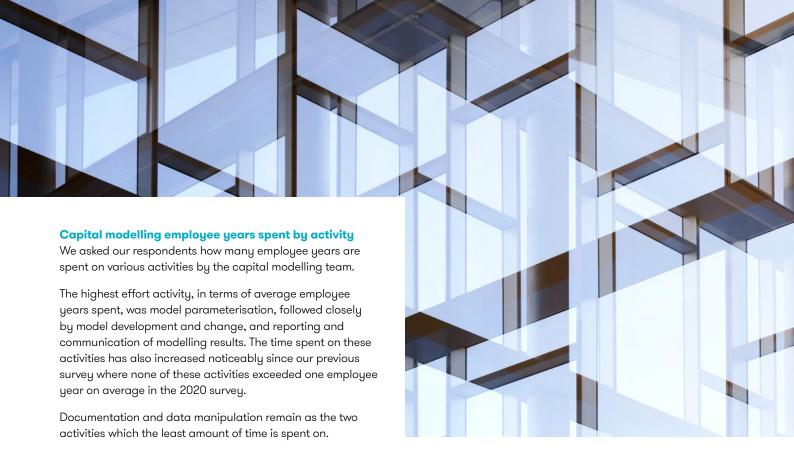
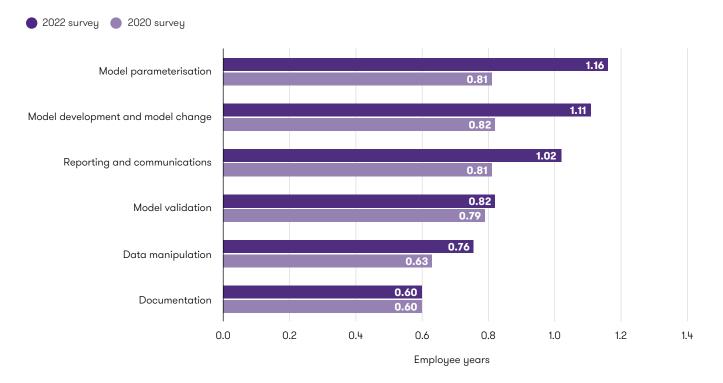


Fig 12: Average number of employee years spent on certain activities



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Capital model uses

In addition to calculating capital requirements, we asked insurers what they use their capital model outputs for. The most common uses were for the ORSA and the Solvency II risk margin calculation, with 92% of respondents using the capital model for these purposes. These were followed closely by business planning (88%). 84% of respondents use their capital model foreach of reinsurance purchase or optimisation, information for strategic decisions and risk appetite management.

Comparing the responses to the previous survey we can see that there has generally been little change in what insurers are using their capital model outputs for. (Note that capital management, pricing and product design and other are new options in the 2022 survey so there are no previous figures to compare against.) This year, a slightly higher proportion of respondents said that they use their capital model outputs for the Solvency II risk margin calculation, business planning and for strategic decisions, but there was a small drop in the proportion of respondents using capital model outputs for the ORSA, reinsurance purchase or optimisation, risk appetite management and setting return on capital targets. Using the capital model for the ORSA has remained the top additional use for the capital model outputs.

By comparison to the previous survey, the proportion of respondents who said that they will use capital model outputs in their for IFRS17 process has increased from 3% to 20%.

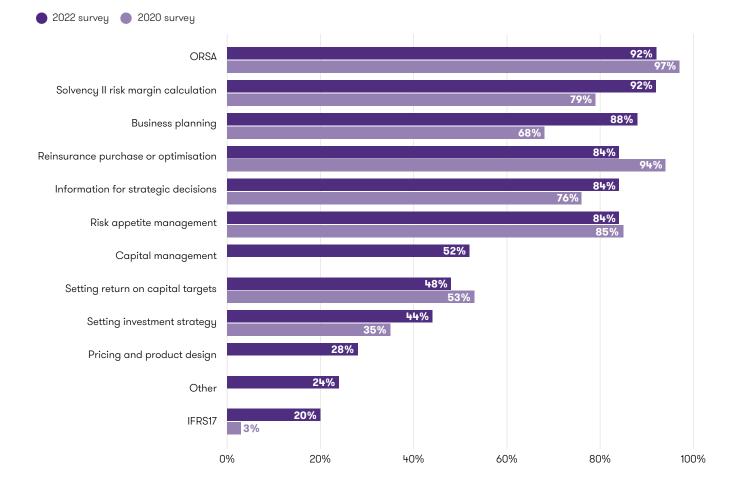


Fig 13: Capital model output uses

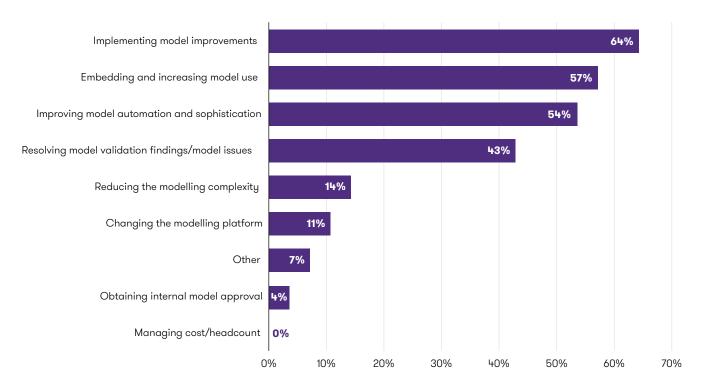
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Future plans

Key modelling priorities for the next 12 months

We asked insurers for their key modelling priorities over the next 12 months. 64% of respondents said that implementing model improvements was a key priority. Embedding and increasing model use and improving model automation and sophistication were the second and third priorities, with 57% and 54% of respondents, respectively, saying that this is a priority. 14% of respondents said that reducing modelling complexity and 11% said that changing the modelling platform are key priorities. Of the respondents that said that they intend to change their modelling platform to Tyche. The remaining half said that they intended to change their modelling platform to Igloo or to a more recent version of Igloo.

Fig 14: Companies modelling priorities for the next 12 months



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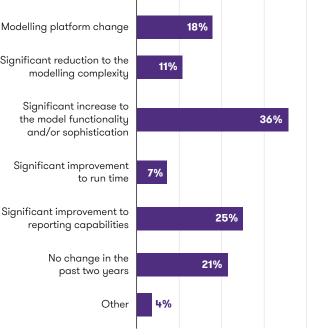
Significant changes implemented in the past two years

68% of our respondents said that they have made at least one significant change to their capital model in the previous two years. Breaking this down by the type of insurer, 77% of the managing agents that responded to our survey said that they have made at least one significant change within the past two years, the equivalent proportion of non-Lloyd's entities is 60%.

The most common reason for model change was to increase the model's functionality and/or sophistication. This was followed by making improvements to the model's reporting capabilities and implementing a model platform change.

two years Modelling platform change 18% Significant reduction to the 11% modelling complexity

Fig 15: Significant changes implemented in the previous



0%

10%

20%

30%

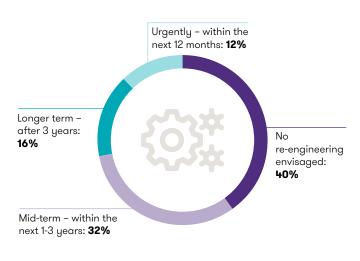
40%

Re-engineering of modelling processes

We asked insurers how urgently they envisaged their models or modelling processes requiring re-engineering. 12% of respondents consider their model or modelling processes to require re-engineering urgently, whilst 32% of respondents expect to re-engineer within the next one to three years and 16% expect to re-engineer in the longer term. 40% of respondents do not envisage that any re-engineering is required.

This is a different result to our 2020 survey, in which 56% of respondents expected to re-engineer within the subsequent one to three years and 15% stated that no re-engineering was envisaged.





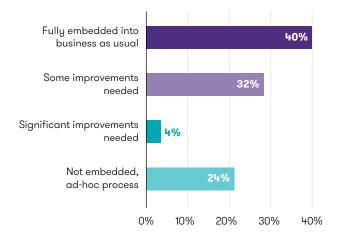
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Major model change

Embeddedness of the major model change process

We asked our respondents about their approach and experience with major model change applications. 40% of our respondents said that their major model change process is fully embedded within their business-as-usual process. Meanwhile, 32% and 4% of our respondents said that their major model change process requires "some improvement" or "significant improvement", respectively. The remaining 24% of our respondents said that major model change applications are undertaken on a fully ad-hoc basis.

Fig 17: Embeddedness of the major model change process



Recent major model changes applications

We asked our respondents about their recent experience of major model change applications. 60% of our respondents said that they have not applied for a major model change in the previous 12 months. Meanwhile, 36% of our respondents have applied for between 1 and 3 major model changes in the past 12 months, and 4% of the respondents have applied for between 4 to 6 major model changes.

None of our respondents said that they have applied for more than 6 major model changes in the previous 12 months.

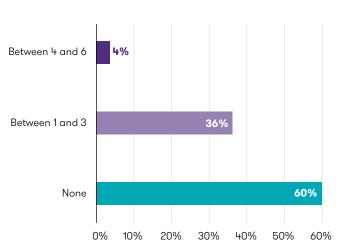


Fig 18: Recent major model changes applications



Employee years per major model change application (excluding model development and validation)

We asked our respondents about how many employee years they invested in their recent major model change applications.

80% of our respondents said that they required one or fewer employee years per major model change application. Also, none of our respondents said that they required more than three employee years per major model change application. The most common resource requirement per major model change application was between 0.25 and 0.5 employee years, with 40% of our respondents stating that this was their resourcing requirement. We also analysed the responses between Lloyd's managing agencies and non-Lloyd's insurers separately. Lloyds managing agencies reported an average of 0.69 employee years per major model change application (excluding validation), in comparison, non-Lloyds organisations reported an average of 0.94 employee years per major model change application.

None of our respondents invested more than 3 employee years per major model change.

Employee years spent on validating major model changes

We also asked our respondents about the time cost for validating major model changes and 0.875 employee years is the average time cost for validating each major model change.

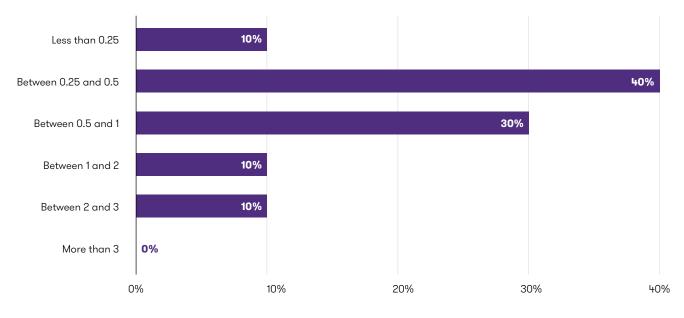


Fig 19: Employee years spent per major model change application (excluding model development and validation)

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Model validation

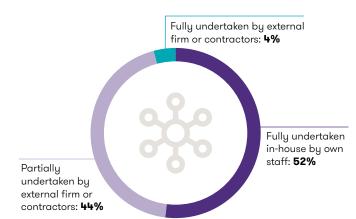
96% of our respondents have a formal model validation process in place. The respondents that do not have a formal validation process, use the Solvency II standard formula for calculating their capital requirements.

Resourcing of the model validation process

We asked our respondents about how their model validation process is currently resourced. 52% of our respondents complete the model validation fully in-house using their own staff. However, a significant proportion of respondents (44%) require some external support from an external firm or contractors. Only a small proportion of our respondents (4%) fully outsource their model validation process to an external firm or to contractors.

In our previous survey published in 2020, the majority of respondents (58%) said that they required some external support from an external firm or contractors.

Fig 20: Model validation process resourcing





Number of employee years required per model validation cycle

We asked our respondents about the number of employee years required, across various areas of their business, for each model validation cycle.

The in-house validation team spend the most time model validation at 0.73 employee years on average across the survey respondents. This is followed by the capital modelling team at 0.49 employee years and an independent team from within the group at 0.43 employee years. Approximately a quarter of respondents resource their validation process without external or group support. On average, external firms spend 0.29 employee years supporting the internal model validation process.

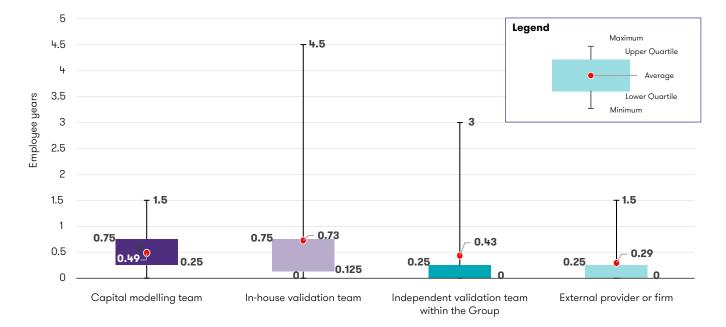


Fig 21: The approximate number of employee years required annually for model validation

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Owner of the model validation process

We asked our respondents which business function is responsible for their model validation process.

The majority of the respondents (87%), said that the model validation process is owned by the Risk Management function, this may present some independence challenges for the insurers where both the capital model and validation are both owned by the Risk Management function.

In addition, 9% of respondents said that the Actuarial team is responsible for model validation, and 4% of the respondents said that the model validation process is owned by Internal Audit.

Future plans for re-engineering model validation processes

We asked insurers how urgently they envisaged their model validation processes requiring re-engineering. 13% of respondents consider their model or modelling processes to require re-engineering urgently, a further 13% of respondents said that their validation process requires re-engineering within the next one to three years and 17% said that re-engineering is needed in the longer term beyond three years. 57% of respondents do not envisage that any re-engineering is required.

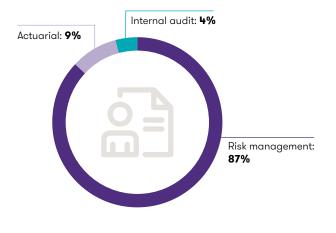


Fig 22: Owner of the model validation process

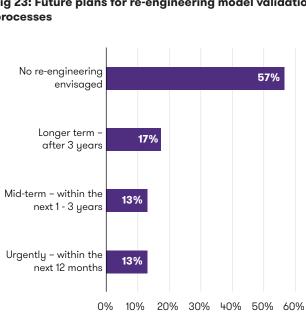


Fig 23: Future plans for re-engineering model validation processes

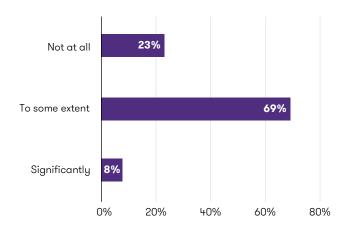
IFRS 17

Use of the capital model for reporting under IFRS 17

In this section, we asked respondents about how their plans for using the capital model for IFRS 17 reporting in the future. Please note that this is different to Figure 13, where we asked respondents about their current use of the capital model.

With the implementation date for IFRS 17 fast approaching, we asked our respondents how extensively their capital model will be used in the IFRS 17 reporting process. In total, 77% of those respondents who will be reporting under IFRS 17, said that the capital model will feature as part of the IFRS 17 reporting process. Of these, 8% said that the capital model will be used "significantly" and 69% said that they will use the capital model "to some extent" in their IFRS 17 reporting process, as shown in figure 24 below.

Fig 24: Expected use of capital model in IFRS 17 reporting process



In comparison to the previous survey, the proportion of respondents who said that they will not use their capital model at all has been fairly static, with 25% choosing this option, comparing to 23% this time.

The market practice in relation to IFRS 17 is still evolving, and we expect the market practice in this area to continue to change and develop over the next two to three years.

52% of our respondents said that they will be reporting under IFRS 17

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Brexit

The impact of Brexit on capital modelling

Having passed the two year anniversary of the UK leaving the EU, we asked our respondents how Brexit has impacted their business and capital modelling activities.

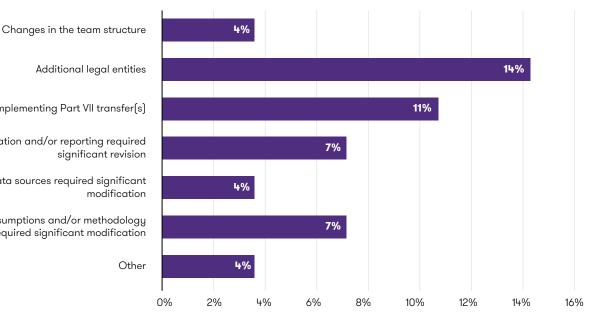
Our survey results showed that 40% of our respondents' capital modelling teams service legal entities in both the UK and EEA countries. Our survey also showed that Brexit has had an impact on their capital modelling activities of more than a fifth of respondents.

Figure 25 below summarises some of the impacts that Brexit has had on capital modelling teams. 14% of respondents said that they have had to introduce additional legal entities and 11% have had to implement Part VII transfers as a result of Brexit. Other impacts our respondents have faced include having to significantly revise documentation and/or reporting processes and having to modify modelling assumptions and methodology.

Brexit only affected the team structure and capital modelling data sources for a small proportion of our respondents, 4% each.

The impact from Brexit on capital modelling teams remains an area to watch as the Treasury and the Prudential Regulation Authority continues to work on Solvency II reforms.

Fig 25: How Brexit has impacted capital modelling teams



Implementing Part VII transfer(s)

Documentation and/or reporting required significant revision

> Data sources required significant modification

Modelling assumptions and/or methodology required significant modification

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Climate risk modelling

Current approach for climate risk

We asked our respondents about how climate risk is allowed for in their capital models and about their plans for modelling this in the future. Only 16% of our respondents said that their capital model currently include an explicit allowance for climate risk.

Of the respondents that currently include an explicit allowance for climate risk, the most common approach (67%) is to adjust the catastrophe modelling assumptions or outputs. The remaining respondents either apply a simple aggregate loading to their capital model or adjust loss ratios on individual classes of business.

16% of respondents make an explicit allowance for climate risk in their capital model

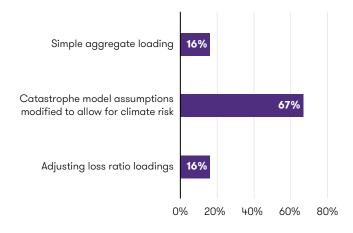


Fig 26: Current implementation of climate risk

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Future plans for modelling climate risk

Of the respondents that do not currently include an explicit allowance for climate risk in their capital model, 38% said that they plan to start to allow for climate risk in the next 12 months, 19% said that they plan to allow for this in the next 1 to 2 years and 5% said that they plan to allow for it after two years.

The remaining 38% said that they do not envisage including any allowance for climate risk over the longer term. We expect this proportion to decrease over time based on regulatory pressure, emerging market practice and emerging trends around climate change. Climate risk is likely to have a direct impact on insurers writing lines of business that are exposed to weather related perils, however, there are also likely to be secondary impacts affecting all lines of business.

Some of the key changes that our respondents are looking to make in respect of climate risk include allowing for the mid to long term impact of climate change on their asset portfolios and including a climate risk feed into the model which is parameterised by the risk management team.

Within the next 12 months 38% Within the next 1-2 years 19% After 2 years 5% No allowance envisaged 38% 0% 10% 20%

Fig 27: Respondents' plans to implement climate risk



Conclusion

Our survey results show that capital models continue to evolve, adapt and improve. They remain an indispensable tool for insurers, and the level of investment across the industry into improving capital modelling capabilities remains high.

The size of the capital modelling team, relative to the number of legal entities modelled, is probably one of the best indicators of the level of investment and importance assigned by an insurer to its capital model. Since our previous survey, this has increased by 26% across the industry on average.

Another indicator is how frequently the capital model is updated. This year we see a clear trend that more insurers are moving towards a quarterly cycle for their regulatory capital calculation, and a decrease in insurers running their model on an annual or six-monthly basis.

The level of competition in the market for capital modelling platforms has also increased, which has driven further technological advancements. Tyche has gained further market share, also, Igloo and ReMetrica have both released improved and updated versions of their modelling platforms. This has allowed insurers to run their models at a higher simulation count. All of our respondents run their capital model using 50,000 simulations or more and the majority of respondents run more than 100,000 simulations.

Insurers continue to use their models across a wide range of strategic and business critical processes, with new uses being introduced for models such as for the IFRS 17 reporting process.

Brexit has impacted capital modelling teams, however, the impact has been moderate. Only 4% of respondents have seen a change in their modelling team structure as a result of Brexit, however, 14% have seen an increase in their workload due to the addition of new legal entities.

Brexit remains an area to watch as the Treasury and the Prudential Regulation Authority (PRA) continues to work on Solvency II reforms. At the time of this report, the PRA is in the process of reviewing the methodology for calculating the Risk Margin, Matching Adjustment and Transitional Measure on Technical Provisions. Over time, further areas may also come under review.

For the insurers subject to IFRS 17 reporting requirements, the significant majority (77%) have said that the capital model will be part of their reporting process. There are some important open questions in relation to this, and market practice is likely to emerge over the next few years. For example, which specific IFRS 17 components will be calculated using capital models and will the capital models will be subject to an external audit?

In relation to Climate Risk, there is some evidence that capital modelling teams across the market are is not moving at a pace that the regulators would like. Only 16% of respondents make an explicit allowance for climate risk in their capital model. Of the respondents that do not currently make an explicit allowance for Climate Risk, 38% said that that they do not plan to allow for climate risk in their capital model. Whilst many of these insurers do not have significant exposure to the lines of business that are directly exposed to weather related perils, climate risk is likely to give rise to secondary effects that impact all classes of business. We expect the importance of climate risk modelling to increase significantly over the next decade.

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