Trading risk:

The value of relationships, models and face-to-face interaction in a global reinsurance market

Report contributors:

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Foreword: The Insurance Intellectual Capital Initiative

The Insurance Intellectual Capital Initiative (IICI) is a consortium of organisations associated with the Lloyd's insurance market. It stimulates and funds research into areas of interest to the broader insurance sector, providing industry with an opportunity to invest in and build closer links with the academic community. The IICI works closely with government Research Councils to ensure that its projects meet industry needs, attract the right academic partners, and benefit from the Research Councils' commitment to co-sponsor research with private sector institutions. Supporters of the IICI are Hiscox, Amlin, Aon Benfield, Liberty Syndicate Mgt, Lloyd's Tercentenary Foundation, the Society of Lloyd's and the Worshipful Company of Insurers. Their representatives meet regularly to develop and commission new projects.

This report presents the results from the inaugural project commissioned by the IICI; a year-long ethnographic study of the London and Bermuda reinsurance markets, comparing the bases of face-to-face and electronic trading and their implications for industry evolution. The project, undertaken by Professor Paula Jarzabkowski of Aston Business School and her team, Dr Michael Smets and Dr Paul Spee, was co-funded by the Economic and Social Research Council (ESRC).

The project has been a productive collaboration between industry and academia in first raising a broad research question, and then working together on a monthly basis to refine the specific questions and shape the conduct of the research. The result is a unique study of international distinction for both the level of industry participation and the quality of the data set. The research team would like to thank the specific members of the IICI Steering group: Bronek Masojada (Chief Executive, Hiscox plc; Chairman of the IICI and Chairman of Lloyd's Tercentenary Foundation); James Illingworth (Chief Risk Officer, Amlin plc); Bill Rendall (consultant and trustee, Lloyd's Tercentenary Foundation); Robert Caton (Head of Risk Modelling, Hiscox plc); Adrian Clark (Joint Head Global Relationship Clients, Aon Benfield); Trevor Maynard (Manager, Emerging Risks, Lloyd's); David Ridley (Senior Policy Manager, ESRC); and James Slaughter (Head of Strategy and Capital Management, Liberty Syndicate Mgt).

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Executive Summary

Over the past 20 years, the reinsurance industry has experienced three profound forces for change. First, technological change has improved information distribution and strengthened connections between global markets. Second, regulatory emphasis on global equivalence in trading practices has generated pressure for convergence across different marketplaces. Third, the widespread acceptance of vendor property catastrophe models has led to more standardised approaches to the evaluation of reinsurance risks, levelling the playing field for decision-making on at least some classes of business.

These changes have intensified competition between reinsurance markets. Reinsurance trading centres in remote geographic locations, such as Bermuda, where it is more difficult to transact business face-to-face, have been able to write risk via electronic communications and now have very significant positions in the global reinsurance market. Simultaneously, Lloyd's of London, one of the original reinsurance markets that is still very much based on the face-to-face approach, has demonstrated its capability to weather financial shocks and downturns and remains an important player in global reinsurance.

These market-level changes are having two main effects on the practice of trading risk:

- They alter the basis of risk-pricing and decision-making from intuitive, face-based judgement to mathematical modelling and ostensibly objective decision criteria;

- They shift the relationships that characterise the reinsurance market from individual, personal ties to more strategic business-to-business relationships.

However, there has been little systematic evaluation of the specific implications of change for either trading practices or for future industry evolution. This report addresses that gap by presenting the results of an industry-commissioned, year-long study of reinsurance underwriting and broking practices in the Lloyd's and Bermuda marketplaces.

The generic findings show that a market built around a central physical location, such as Lloyd's, is valuable for business that requires face-to-face contact at the point of decision-making. However, much business can be transacted through selective use of face-to-face interaction at prior stages in the process, rather than at the 'point-of-sale'. Bermuda is an example of such a 'transportable' reinsurance market; markets can be established where regulatory and taxation conditions are favourable rather than necessarily being bound to a particular physical location.

The specific findings show how the selective use of face-to-face and electronic interaction can reduce inefficiencies and improve decision quality in either type of market.

The report covers four main areas. The findings in Section 1 illustrate areas of convergence but also substantive differences in workflow and risk evaluation between markets. Section 2 outlines six key learning points about redundancies and inefficiencies in both markets. Section 3 develops frameworks for relationship management, risk evaluation and selective application of face-to-face contact to address these learning points. In Section 4, the trading process is broken down into specific modules of activity, with recommendations for best practice in each module. Reinsurance firms and broking houses can use this modularisation process as a guide to evaluating and changing their current practices.

Introduction: Evaluating face-to-face and electronic trading

The Lloyd's of London reinsurance market has grown from a historical tradition of face-to-face interaction between reinsurance brokers and underwriters in the assessment and placement of reinsurance risks. Personal relationships are seen as crucial in volatile reinsurance markets, where trust and personal advocacy are important factors in expert judgement. Lloyd's is, therefore, a market characterised by face-to-face communication, which is associated with long-term relationships that enhance expert judgement. Modelling applications and electronic trading have met with resistance in the past, due to perceptions that models are inaccurate for many classes of business, such as casualty, marine and terrorism, while electronic transactions marginalise the expert judgement necessary to supplement risk management models.

This report is based on an ethnographic study conducted in 17 firms over the 2009/10 reinsurance trading cycle.

Recent advances in technology and data communications have enabled other global reinsurance markets like Bermuda to compete in a way that does not rely on face-to-face interaction. The current Bermudian reinsurance companies were largely set up with substantial capital bases and a remit to fill gaps in property catastrophe capacity in the wake of US disasters. The prevalence of information-rich vendor models for analysing US property catastrophe business has increased the reliance on mathematical models to support underwriting decisions in this market. Additionally, because Bermuda is an isolated market, operating between time zones, trading has more typically been conducted through electronic communications. Bermuda is therefore a market characterised by electronic communication and associated with scientifically-modelled bases of judgement.

Ethnography is a social science that involves 'fly-on-the-wall' observation. It gives detailed insights into how work is being done, the meanings people attribute to the technology and other tools that they use, and evidence of what practices are and are not working in organisations.

While electronic communication is increasingly widespread, strong perceptions remain of reinsurance as a relationship-based industry. Face-to-face interaction (face) is a valuable resource in generating the trust that supports long-term relationships and repeat transactions over many years. It also aids complex negotiation by increasing consensus between parties, although this may be undesirable in a free market context of independent pricing and decision making. In particular, face interaction produces a sense of obligation that can predispose brokers and underwriters to seek favours on transactions. Face is also a costly mode of doing business because it requires parties to be brought together physically. Electronic communication can be more efficient and better suited to independent decision-making. However, electronic communication can lack the rich conversation, non-verbal expressions and body language necessary to transfer knowledge about complex business over repeat negotiations.

The data for this study is unique, comprising audio and video recording of live trading of over 800 decisions and across competitors and markets. This unprecedented level of access is a testament to the reinsurance industry's willingness to examine its own practices.

In order to uncover the challenges and potential pitfalls of these changes and their implications for the longer-term potential of each market, the Insurance Intellectual Capital Initiative (IICI) partnered with the Economic and Social Research Council (ESRC) to commission a one-year ethnographic study with the following objectives:

- Compare trading practices for face-to-face, expert-based judgement and electronic, scientifically-modelled judgement
- Provide a people-centred analysis of the strengths and weaknesses of each approach for the various stages of the trading process
- Consider the implications of each approach for industry evolution

Key Terms

- Face-to-face communication involves two or more people being present in the same time and space for information exchange, for example in a meeting or informal encounter.
- Electronic communication includes a set of technologies, including telephone, email and file-transfer platforms for exchanging information. It is not electronic or online trading.

Section 1: Persistent differences and convergence

1.1 Stereotypical differences

Stereotypical perceptions persist about different trading practices in Lloyd's and Bermuda. Stereotypes accentuate beliefs about a particular group in a generalised and exaggerated way, in the same way that national stereotypes expose prevalent beliefs about different cultures. Although they may not be accurate, they contain some core truths that facilitate comparison of the essential elements of different groups. This section introduces some stereotypical, yet commonly held beliefs about broking and underwriting in the Lloyd's and Bermuda markets.

Lloyd's stereotypes

Lloyd's is perceived as a market based on **herd instinct**. In Lloyd's there is a strong historical sense of community that is reinforced by the centrality of the Lloyd's building, and expectations that business will be done by brokers queuing to see underwriters sitting at boxes in close proximity to each other. This environment facilitates frequent and close business and social interaction and rapid exchange of market gossip. The closely knit face-to-face market generates strong norms that exercise social control on behaviour. Social controls are manifested as herd instinct, which is exacerbated by brokers, as they take pencilled lines and information on the placement around the trading room, increasing the visibility of participants' actions. Underwriters subconsciously avoid sticking out at the top or the bottom of the market, fearing exposure to ridicule if they 'stick their head above the parapet' with a price or a line size that is strongly at variance with the market. Similarly, they are conscious of the schadenfreude that accompanies losses in a market where actions are highly visible. Herd instinct can provide market confidence and stabilise pricing. However, its downside is peer pressure, which can favour conservative bets and predispose a portfolio of small, low-return lines that are remote from the risk.

> "If it had a loss, you'd look like a real tool if you wrote it"
> (Lloyd's underwriter)

The Lloyd's market offers a **bespoke service**, as all programmes are treated individually, with multiple personal interactions between a broker and underwriter. This bespoke service is particularly valuable on complex programmes, or those with scarce information. Face-to-face negotiations, supported by deep relationships with and trust in the broker, supplement lack of hard, quantifiable information and enable complex programme structures to be tailored to create value for both the cedent and the reinsurer. A bespoke market service can support innovation and, indeed, this is a historical feature of the Lloyd's market which pioneered excess of loss reinsurance. However, the downside is that it is often applied indiscriminately; for example, even to renew a small expiring line on a well known programme.

A related stereotype of Lloyd's is that it writes **quirky business**. The historical core of Lloyd's was less analysable marine business which lent itself well to the bespoke, relationship-based mode of doing business. However, as other markets are increasingly good at doing analysable business that does not require as much face interaction, they take a larger share of that business. Thus, in an exaggeration of the stereotype, Lloyd's could be left with the quirky business, such as some marine, terror and political risks, that is harder to analyse and requires more face-time, but is not necessarily high volume or high value business. Although a stereotype that does not reflect the actual range of business being written in Lloyd's it is important to be aware of it and guard against such perceptions.

> "All those little dip shit businesses ... those are the ones that Lloyd's crawls all over itself to write; at 10%, there's no profit margin in it"
> (Bermudian underwriter)

Finally, Lloyd's is a fully-intermediated, **broker-led market**. London located brokers bring business generated by brokers around the world into the Lloyd's market, ensuring that Lloyd's underwriters have access to a wide range of global business. Strong business relationships are formed through frequent interactions that include social events, such as dinner, drinks, golfing weekends and race meetings. These relationships advantage the broker because of the face-broking that occurs in every stage of the trading process. When firm order terms are lower than expected, or when a larger line or strong lead is required, brokers can stimulate a sense of obligation, either by intimating current or future favours, or more subtly, by calling on strong social ties. Simply, it is hard to say no to a person's face, particularly when the relationship is also social.

> "We'll see you at Ascot; you and the wife. You haven't been keeping up with your social obligations enough (laughing), so you should really do Ascot AND Wimbledon this year"
> (Lloyd's Broker to Lloyd's Underwriter)

Bermuda stereotypes

The Bermudian market is characterised by a different set of stereotypes. In contrast to the herd instinct that characterises Lloyd's, the dominant mentality in Bermuda is to **stand out at the top** by writing large profitable lines. With large capital bases, no market restrictions on line size, and a focus on profitable and more analysable US property catastrophe business, many Bermudian companies favour writing large lines and, if possible, dominating those programmes where there is good information to appraise risks. This is perceived as a rational competitive choice; if a company sees a programme it believes it can understand and price profitably for the degree of risk, it makes competitive sense to take as large a share as the client allows.

> "We don't write 5% on every deal that comes across the desk. If we think we really understand the risk in a particular deal, we'll take as much of it as we possibly can" (Bermudian underwriter)

The origin of Bermudian property reinsurance in information-rich US property catastrophe business, has led to a perception that Bermudians are **model-driven**. While extreme and rare events, such as earthquakes, are hard to model accurately, vendor models provide useful guidelines, because they have high quality information to support risk evaluation, including zipcode data on the location of risks and a measurement of the probable occurrence of claims. Bermudians do 'load' vendor models to account for the soft or more judgemental elements of a risk. However, they write more quantifiable risks, leading to a stereotypical, albeit inaccurate, view that they lack experience or judgement, and excessively rely on models to price risks.

> "The teenage scribblers on the rock; Bermudians just basically regurgitate what comes out of a computer" (Lloyd's underwriter)

A third stereotype of Bermudian reinsurers is that they **struggle to diversify**. They write 'vanilla' mono line property catastrophe business, because other types of business, such as international property, aviation, marine and energy do not compare favourably to big lines on US catastrophe programmes in terms of either technical evaluation or profit margin. This is seen as a weakness for Bermudian companies because a diversified portfolio spreads risk and is necessary to improve standing with rating agencies.

Finally, Bermuda is more of an **underwriter-led** market in which reinsurers typically initiate contact with brokers. Therefore, no strong Bermuda stereotype has formed with regards to broking practices. Rather, Bermudian reinsurers often have 'location paranoia', fearing that they will miss business because they are geographically remote. They therefore actively court brokers and clients, for example through sailing, deep-sea fishing and diving trips, to encourage them to bring interesting pieces of business. However, these fears may be associated with being relatively new in the global market rather than a feature of location. Once Bermudians establish a presence on programmes, there is no reason to assume that their location will mean they are written out of business where capacity is needed.

> "Any opportunity we get to do business we jump on; then we might take them sailing. If you're friendly with the broker your relationship with the client is better" (Bermudian Underwriter)

1.2 Convergence: Overlooked similarities

The above stereotypes reflect persistent beliefs that do not always keep pace with reality. There is much more similarity in the two markets than these stereotypes convey, particularly in the use of a full range of face, phone and email communication and in the reliance on technical models to support risk analysis and pricing. However, this convergence is occurring naturally, rather than as part of a strategic effort to change practices. Hence, the firms are not necessarily aware of this gradual evolution in industry practices.

> Lloyd's versus Bermuda is not a robust distinction. Stereotypes are exaggerated and overlook similarities between the markets.

Lloyd's: Thinking outside the box

The box remains the dominant place for interacting, but it is no longer the dominant place for decision-making. Rather, there is considerable evidence of 'thinking outside the box':

- The box is a place for ratifying a decision that has largely been made through analysis and thinking in the office.
- Decisions are being deferred from the box to take into account the increasing technicality of decision-making, in which all classes of business are subject to at least some quantitative analysis.
- A greater mix of communication media is being used, as Lloyd's underwriters and brokers phone and email each other and brokers go directly to reinsurers' offices to work through programmes, often to make use of time outside box hours.

These changes are covert. Box visits continue to be regarded as the norm despite considerable frustration with their inefficiencies. For example, while brokers often feel that queuing is a waste of time, they also believe that many underwriters expect this show of commitment. As strong social norms sustain the myth that the box is central to decision making, it is imperative that brokers and underwriters clarify how they wish to communicate on a programme. Wider acknowledgment of these naturally occurring changes would alleviate the pressure to conform to social norms of appearing at the box without consideration of the added value to be gained from that interaction.

Bermudians in contact

The Bermudian market also shows convergence in forms of communication, as underwriters and brokers actively stimulate interaction for the following reasons:

- Underwriters regularly phone their brokers to discuss the details of a programme when they need help to understand complex pieces of business.
- Many Lloyd's trained underwriters and brokers working in the Bermudian market transfer their Lloyd's contacts, enabling them to draw on well known social networks.
- A growing number of brokers work on location in a wholesale broking role in Bermuda, interacting face-to-face with underwriters in their offices to provide information on complex programmes and new classes of business.
- Bermudian reinsurers are actively diversifying into the classes of business being written in Lloyd's, such as marine and aviation. They interact frequently with brokers through phone and email, placing small lines as an 'R&D' approach to learning about this business.

In Bermuda, three factors mitigate the impact of reduced opportunities for face-to-face interaction. First, as Bermudians have become increasingly practiced at doing business by phone and email, their familiarity reduces the extent to which it is less effective than face. Second, as many Bermudian underwriters already personally know their brokers around the world from site visits and social occasions, they have a social network that they can draw on effectively by phone and email to transact business. Third, Bermudian reinsurers are often working on well-known renewal business on which email and phone provide sufficiently rich communication to substitute for face interaction.

Evidence of Convergence

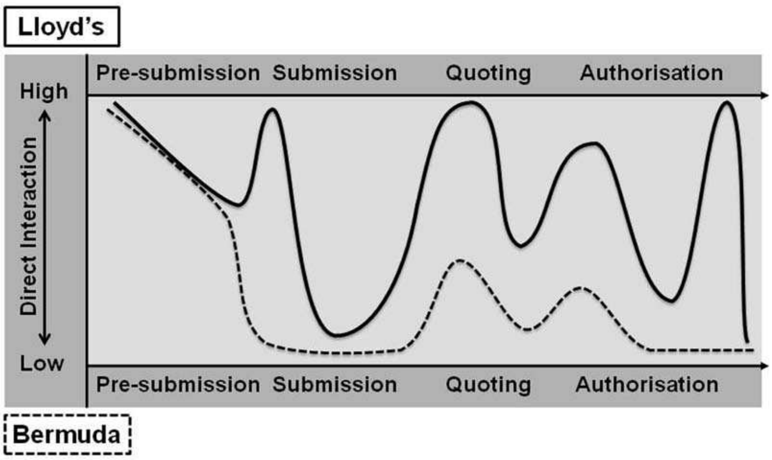
Both markets:

- Use all forms of communication from email to phone to face;
- Are strongly focused on technical analysis of risk;
- Write across the range of classes of business

1.3 Workflow differences

Despite evidence of convergence there are robust differences in workflow in the Lloyd's and Bermuda marketplaces. Much of this variation arises because of differences in broker intermediation. Lloyd's has a two-filter intermediation process in which London 'wholesale' brokers bring global business into the Lloyd's market. The 'retail broker' who has produced the business in its country of origin uses the Lloyd's broker to place the business in Lloyd's. Bermuda, by contrast, has a one-filter intermediation process, where reinsurers deal directly with the retail broker in the country of origin, which necessitates phone or email contact. As illustrated in Figure 1, these differences are associated with variation in the extent and intensity of direct interaction during the four phases of the trading process.

Figure 1: Comparison of direct interaction patterns in Lloyd's and Bermuda



As shown in Figure 1, both markets engage equally in face-to-face interaction during the client meetings that are part of the pre-submission phase. These pre-submission activities take the following forms. First, there are meetings between brokers, clients and reinsurers at industry conferences, such as the Reinsurance Rendezvous in Monte Carlo, and follow up conferences in Baden-Baden and PCI in the USA. These interactions are always face-to-face, although their value has to be questioned given the brevity of meetings, which can be as short as 25 minutes. Both markets also see a continuous stream of clients on roadshows, as London and Bermuda are popular places for a visit, bringing the possibility of some golf, deep-sea fishing or opera, as well as business. Additionally, there is high-profile corporate entertainment, such as trips to ski resorts and islands, which, while

> "We did a sailing event on the south coast of the UK just because one of our clients liked sailing". (Bermudian Underwriter)

less frequent, occur for senior executives and their spouses in both markets. While these relationship building activities are undoubtedly fun, they need to be systematically applied to achieve specific value-adding objectives, which is the focus of Section 3.2.

Following pre-submission, the two markets vary significantly in the extent of direct interaction during the submission, quoting, and authorisation phases of the trading process. These differences are explained in Table 1.

Table 1: Variation in phases of the workflow between the two markets

Phase	Lloyd's	Bermuda
Submission Formal start of trading process, through submission of information from broker to underwriter.	Made at the box with the wholesale broker bringing a paper copy of the information pack to the meeting. • Brokers value the opportunity to influence underwriter's impression of the programme. • Underwriters value the focus on key aspects of the programme while gathering other potentially valuable market gossip. Underwriter advises analysts, who are usually located in the same office, to take specific factors into account.	Done by email as submissions come directly from retail brokers. Typically a submission is forwarded straight to the analyst without looking at it or talking with the broker. The underwriter takes a first proper look at the risk when the modelling comes back from the analyst, who is usually located in a different country to the underwriters.
Quoting Reinsurers analyse programmes and submit prices to brokers, which generates a range of potential prices for a programme.	Multiple broker visits at the box to supply additional information about the risk. Process can add value where deals are complex and require negotiation to arrive at a structure that meets the client's need and a price that is acceptable in the market. Underwriters await broker visit at box to submit quote.	Underwriters contact the broker by phone or email if they have specific queries about the nature of the programme. Phone contact is used particularly in cases where the programme structure is complicated; additional information is required to understand the risk; or to gauge the ballpark in which to position the quote. Underwriters submit quote by email.
Authorisation Final decision involves: • Brokers submit prices, known as Firm Order Terms (FOTs) to underwriters; • Underwriters offer the size of line they wish to have on different layers of the program, termed writing a line. Brokers allocate underwriters all or part of the line offered, termed signing a line.	Face interaction as the broker brings FOT to the box on a sheet of paper. • Brokers value face as they can persuade potentially reluctant underwriters to support less favourable programmes. • Underwriters establish whether there is flexibility in pricing and the extent of capacity in the market, in order to judge their commitment to a line and layer. Lines are pencilled at the box, meaning that underwriters put a signature against the line they will write which binds them to the offer that will appear on the formal authorisation document. • Underwriters can see the extent to which other reinsurers have supported a programme so reinforcing their own market conformity.	Contact with the broker may be by email if it is simply a matter of writing a line, but may involve phone contact, depending on the extent of variation between the quoting price and the FOT. The slip is then emailed, as the logical end to a piece of business, rather than an opportunity for further direct interaction and, potentially, extraction of favours or influence on either side. Broker emails signed lines.

Differences in direct interaction during the workflow

Submission

- Lloyd's: High direct interaction, predominantly face-to-face
- Bermuda: Low direct interaction, predominantly email

Quoting

- Lloyd's: High direct interaction, predominantly face-to-face
- Bermuda: Moderate direct interaction, predominantly phone

Authorisation

- Lloyd's: High direct interaction, predominantly face-to-face for writing and signing lines
- Bermuda: Moderate direct interaction, with some phone for writing lines, shifting to low interaction using email for signing lines

1.4 Does difference make a difference? Contextual and analytic 'gut feel'

Differences in workflow do not usually generate differences in price, except on private deals, because reinsurance is largely a subscription market. However, they do generate differences in the initial appraisal of a programme because of difference in the face-based or electronic submission process. First impressions of a risk matter for its subsequent evaluation.

In Lloyd's, the initial 'gut feel' or intuitive impression comes from the face-to-face submission during which the broker explains the firm-specific, regional or historical context in which this programme and cedent are situated and which should be considered in subsequent analysis. This first impression informs the modelling of the risk, as Lloyd's underwriters and analysts are co-located. Underwriters are able to discuss with analysts the 'soft' factors in the submission that need to be accounted for in modelling. We label this initial appraisal **contextual judgement**, because it places the risk in its own particular relationship, programme and market context, including those soft factors that may not be incorporated in models. The Lloyd's market is good at evaluating programmes in context. This is why Lloyd's is able to make judgements on unusual or complex programmes, even those with lower margins or hard-to-model qualities.

> "The art is very important. It is the nose; you can tell if something doesn't look right"
> (Lloyd's underwriter)

By contrast, in Bermuda submissions come in by email and are forwarded straight to the analyst, who is often in another country rather than co-located with the underwriter. Underwriters form their initial 'gut feel' when they look at the modelled results. If the analysis is not favourable, the underwriter calls the broker for more information and then contacts the analyst to remodel in light of that information. While Bermudian underwriters appreciate soft factors, they 'need a number' to suit their technical approach to underwriting. We label this **analytic assessment**. It explains why Bermudian underwriters are focused on information-rich risks that they can analyse, why they are willing to place large 'bets' on those risks that they have analysed, and why they have traditionally struggled to write information-scarce, hard-to-quantify risks.

> "We want data on everything. No exposure data – no deal"
> (Bermudian underwriter)

Implications of differences in initial appraisal of risk

Risk appraisal varies by whether the first impression is formed:

- Prior to analysis, emphasizing contextual judgement; or
- After analysis, emphasizing analytic assessment.

The emphasis on contextual or analytic judgement should vary with the specific properties of any particular risk, not with the way information is initially received.

Section 2: No one best way

2.1 Strategic implications of the different locations

Section 1 indicates that there is no one best way. There are advantages and disadvantages to doing business in either Lloyd's or Bermuda. However, the two cases indicate strategic aspects of each market that are significant for industry evolution. Essentially, Lloyd's is 'here to stay'. The physical aspects of a market in which different players are co-located and interact within a central trading hub, such as the Lloyd's building, mean that this marketplace is tied to its geographic location. It is attractive to market participants because of the ease of access to other participants in that location. Furthermore, the central hub adds value for business that requires face-to-face trading, particularly at the point of decision-making.

However, much business can be transacted through selective use of face at prior stages in the process, for example in pre-submission meetings. Hence, Bermuda is a useful example of the 'transportable' nature of reinsurance markets; it is possible to trade by phone and email from anywhere and to 'pack up and leave' if conditions become unfavourable. While this may be a threat to Bermuda as a specific financial marketplace, it is an opportunity to the reinsurance industry more widely, because it provides opportunities for 'institutional arbitrage' shifting to locations where a favourable combination of labour, regulation and taxation enable efficient or cost-effective business.

2.2 Key learning points about inefficiencies and redundancies

Neither the Lloyd's nor the Bermuda workflow and initial basis for judgement are ideal. Rather, the two markets reveal six main redundancies and inefficiencies that provide key learning points for the wider reinsurance market.

Appraise client meetings: Both markets have high face interaction for client meetings. However, **the purpose of client meetings and the value that different types of face add is not clear**. Rather, various interactions from conference meetings to roadshows to corporate entertainment are used indiscriminately. Face strengthens business relationships by providing better client information, particularly in regions or classes of business where information is less available. Face also deepens existing relationships and strengthens competitive advantage on programmes where information is widely available. In order to generate more value, the different purposes of client meetings should be defined and used to distinguish the most appropriate type of face-to-face meeting. Methods for maximising value from client meetings are proposed in Section 3.2.

Develop focussed broker intermediation: Brokers add value by intermediating between cedents and reinsurers. However, **the role of different types of broker intermediation in creating value for cedent-reinsurer relationships lacks focus**. Underwriters want high quality cedent information to support risk evaluation. Brokers who have close relationships with their clients can provide high-quality information packaged in a user-friendly way. Thus, underwriters that deal directly with the retail broker who produced the cedent may be at an advantage. Wholesale brokers add value through their deep understanding of particular reinsurers' appetites for business which can be strengthened to better cross-sell and establish more exclusive business-to-business broker-reinsurer relationships. Frameworks for distinguishing the purpose of different broker relationships and increasing their value in the intermediation process are presented in Section 3.2.

Make broker-underwriter contact on a 'need-to-know' basis: In Lloyd's there is repeat face interaction at all stages of the process. This is due to both habit and filtering of information in a wholesale broking market, where wholesale brokers revert to the retail broker to gather specific information. By contrast, Bermudian underwriters tend to have contact with retail brokers on a 'need-to-know' basis, going directly to the source of information when they have a specific query. We advocate direct contact between either retail or wholesale brokers and underwriters for specific purposes, rather than indiscriminate application of face-to-face interaction out of habit. In particular, **as face is a costly resource, face-to-face interaction should be used where it adds value and substituted with email or phone where these are equally valuable**, which is presented in Section 3.4.

Identify information deficits: Face-to-face interaction adds value when there is need for richer information to evaluate a risk. **For complex programmes and those that lack quality information, phone and email are less effective modes of communication.** First, missing the initial verbal broke that aids contextual judgement often leads to re-analysis when further information is gathered. Second, it is difficult to work through the information that supports complex risks on the phone; it is hard to be on the same page or, indeed, the same cell of a spreadsheet when working by phone. Hence, face interaction should be selectively applied to add value in the quoting phase for complex and information scarce risks (see Section 3.3).

Avoid duplication: Duplication of paper and electronic information involves duplication of effort and obstructs systematic and transparent logging of risks. A face-based system of interaction, such as at Lloyd's, predisposes duplication because a paper copy is always brought to the box. That paper copy is typically scanned as a record of the transaction, in addition to emailed copies, so duplicating both information and effort. By contrast, electronic submission predisposes an electronic process, which is supported by the tailor-made start up systems in some Bermudian companies. However, even in Bermuda, some companies also routinely print and store paper copies of their files. Thus, both markets show duplication of information and systems that are partially paper-based and partially electronic.

Be aware of historic rituals: Signing the slip is an elaborate and time-consuming face-based Lloyd's ritual. It is, quite literally, the 'underwriter's pen', which symbolises the quality of underwriting at Lloyd's. In this ritual, the broker presents the slip for each layer to the underwriter, who stamps it, records the programme numbers and lines by hand, and then signs the slip, typically using a specifically designated and valuable pen. The slip is then passed to the underwriter's assistant, who scans it and returns it to the broker. This ritual takes up to 20 minutes to complete. By contrast, in Bermuda one person can process a batch of slips across a number of risks in a short period of work. Signing the slip is symbolic, with no evidence that the actual quality of underwriting is affected by electronic or face-to-face slip processing. It is thus important to evaluate the ongoing purpose or efficiency of some rituals.

Six key learning points to address inefficiencies and redundancies

- Distinguish the purpose of client meetings
- Develop focussed retail and wholesale broker intermediation
- Establish face-to-face contact on a 'need-to-know' basis
- Identify those information deficits under which face adds value
- Avoid duplication of paper and electronic information
- Identify and minimise ritualistic use of face, such as signing the slip

Section 3: Addressing inefficiencies and redundancies

3.1 Three key dimensions of the trading process

In order to address the inefficiencies and redundancies identified above, it is necessary to understand three key dimensions on which trading hinges: relationship value, information quality, and programme complexity.

Relationship value

In order to maximise value from relationships, it is necessary to **measure the relative value of any particular relationship**. Reinsurers should use pre-submission meetings to score and rank clients on their value; that is, their importance for the underwriter's book and the portfolio of the firm. In this scoring exercise, ''value' should be interpreted broadly to include current value, but also potential value based on business development plans. It should consider possible changes in the cedent's level of reinsurance purchasing, the cross-selling potential across different classes of risk, and its level of correlation within the reinsurer's portfolio. Understanding relationship value ensures that those relations which generate the most solid returns to a firm receive the highest levels of relationship management, including entertainment such as sailing, golf, skiing and dinner. At the same time it guards against over-investing in face-to-face interaction and other costly mechanisms of relationship management where opportunities for pay-off are limited.

"Relationships to make business more sticky are probably more important than the knowledge of the underlying risk. I think you can get that without a relationship". (Bermudian Underwriter)

Information quality

Information quality is the key dimension on which both pre-submission relationship management and post-submission risk appraisal and interaction hinge. High quality information **accurately** specifies the value of insured assets, be it a single aircraft or a cluster of properties in a designated area. **Granularity** reflects the level of detail with which aggregate values are covered, for instance whether property values are aggregated by district or postcode, helping to improve the accuracy of estimates about the magnitude of a potential loss. High quality data is also presented in a **standardised**, easily analysable form.

"It's understand the company, what they do and how they do it, how they make decisions, get inside how they underwrite, how they select risks, how they adjust claims, what risks they're taking on." (Lloyd's Underwriter)

Verifiability measures the extent to which cedent-provided data can be cross-checked against information from independent sources, such as ratings agencies or subscription databases such as Perils. High quality information may be gathered in two ways. First, information about the cedent's governance, portfolio and underwriting practices can be gained through pre-submission meetings; so called 'underwriting the underwriter'. Second, quantitative and 'soft' information about the risk may be gathered from the submission documents and any supplementary broker interaction.

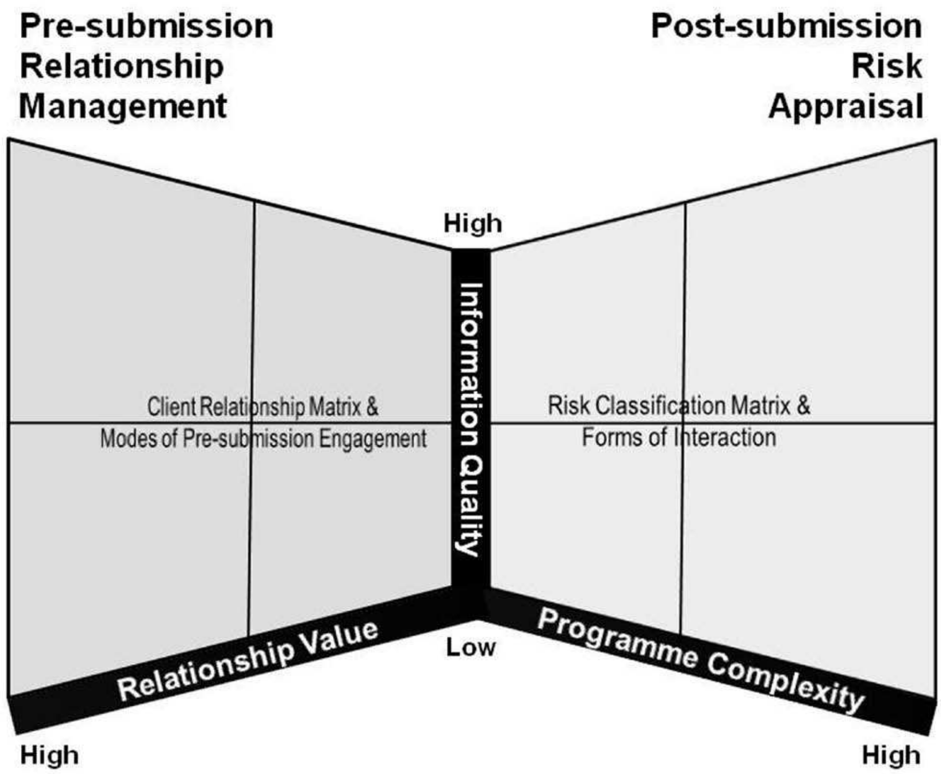
Programme complexity

The relative complexity of a programme refers to the structure of a reinsurance product, such as the number of layers being bought to provide a horizontal or vertical cover. Programmes with a **simple structure** clearly define inclusions and exclusions, provide more transparency and are, thus, more easily analysable. By contrast, programmes that conflate multiple perils within layers or those with **complex** wrap-around structures obscure the specific elements being reinsured and complicate underwriter analysis. Therefore, more complex structures are likely to necessitate more broker-underwriter interaction during submission and risk appraisal.

These three dimensions are the foundation for our following proposals to improve pre-submission relationship management (Section 3.2), post-submission risk appraisal (Section 3.3), and the efficient use of electronic and face-based communication (Section 3.4). Critically, as shown in Figure 2, information quality is the hinge upon which to evaluate:

- How best to add value in client relationships
- What blend of analytic and contextual judgement is best for appraising different risks
- When it is most effective to use face-to-face, phone or email interaction

Figure 2: Key dimensions for managing the pre and post-submission process



3.2 Pre-submission relationship management

Reinsurance is not characterised by spot transactions between parties who never meet again. Therefore, relationships between cedents, underwriters, and brokers have always been at the heart of the industry. Traditionally, these relationships were built on personal social ties and trust. Increasingly, however, these are being superseded by business-to-business relationships. At the same time, personal goodwill trust ("he's a nice guy; we've played golf together") is being superseded by trust in the information cedents provide or the practices they employ ("they're good underwriters"). Good relationships produce information and trust that helps partners to transact business in the face of uncertainty. Yet, despite the positive effects that good relationships can achieve, there is little clarity about what any particular relationship is meant to achieve. Relationship management is thus poorly customised. Choosing the right form of engagement is difficult when the purpose of a relationship is unclear. Therefore, reinsurers, cedents and brokers should conduct a **relationship appraisal** to determine the dominant purpose of a relationship.

> Choosing who to ski, drink or dine with, who to visit, and who to see at conferences is best determined by the purpose of the business relationship, rather than the conviviality of the individual

Relationship appraisal

Relationship appraisal is a **scoring exercise** to establish the dominant purpose of a relationship. It answers questions of:

- Which business partners do we want relationships with?
- What is the main purpose of a relationship?
- How should the relationship be managed?

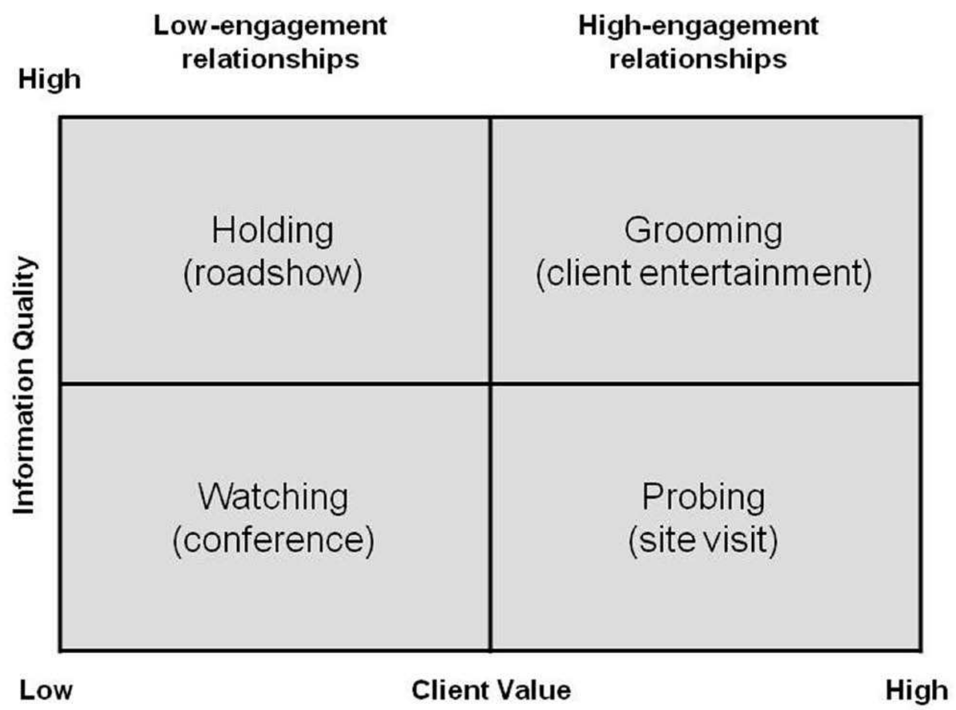
Relationships in reinsurance serve two main purposes: First, relationships help **address information deficits**, because underwriters need confidence that they understand what they are reinsuring to make decisions. This confidence is either based on high quality data about risks or on compelling information that instils trust in the cedent's underwriting practices. Second, relationships **help gain and maintain access to preferred, valuable business partners**. Generally, transaction parties invest more time in nurturing relationships with high-value business partners because they have greater potential for pay off.

These objectives – counteracting information deficits and securing access to valuable partners – should dictate how a relationship is managed. As their balance can shift from year to year it is essential to re-evaluate relationships at the beginning of each renewal season. To capture the dominant relationship purpose, business partners can be scored on the two dimensions: **information quality** and **relationship value**. By combining the resultant scores, market participants are able to develop a relationship portfolio, in which they can match the purpose of a relationship with the most suitable type of pre-submission meeting.

Managing the relationship portfolio

Based on the relationship appraisal exercise, reinsurers can rank cedents on a numeric scorecard and position them in the relationship portfolio matrix shown in Figure 3. Brokers can do the same for their clients' reinsurer panel, as discussed later. The quadrants distinguish four distinct, idealised types of relationship with associated typical forms of interaction that fall into two broad categories: high engagement strategies for high value clients and low engagement relationships for low value clients.

Figure 3: The relationship portfolio matrix



- **A watching relationship** is appropriate for cedents whose development an underwriter wants to 'watch from a distance'. The client's low value makes it uneconomical to invest in a closer relationship that could overcome informational deficits. Meeting at one of the annual reinsurance conferences is sufficient to stay appraised of the cedent's business development without committing serious resources. Alternatively, brokers could manage watching relationships for reinsurers.

- The **holding relationship** is typically a case of keeping a small but well managed client on the books and ensuring the relationship is maintained to profit from any change in growth or potential value. Underwriters should be willing to commit some time to these clients, for example seeing them on a pre-renewal roadshow. Deeper personal engagement is inefficient because there are no information deficits to be addressed through extensive face-to-face interaction and client value does not warrant such investment.

- The purpose of a **probing relationship** is to develop sufficient confidence in a cedents' underwriting ability to counteract the lack of publicly available information. This type of relationship is best managed by visiting client premises and probing their work practices; so-called 'kicking the tyres'. Seeing the risks and how they are managed helps reinsurers to validate information they find in submission packs. The costly investment of conducting client visits in person is warranted by the value of the client.

- The objective of a **grooming relationship** is to 'get more of what everybody wants'; analysable, high-value business. All players in the market can appraise the attractiveness of these clients, leading to oversubscription and heavy signings. Therefore, underwriters should use high engagement strategies to 'groom' clients. The aim of the relationship is to protect participation on the programme, expand line size, extend the relationship to other programmes, or even to participate in private deals. Grooming relationships create barriers to entry for other reinsurers. Corporate entertainment is thus an important tactic; high-quality social events such as skiing and sailing signal willingness to invest in a relationship.

Focused retail and wholesale broker intermediation

Brokers can add value to cedent-reinsurer relationships by playing one of two roles. Understanding these roles can help broking houses provide focused intermediation.

- Brokers add value by acting as **information producers**. Here, the retail broker's deep knowledge of the cedent is critical in addressing information deficits. However, often information is not well-packaged or usable, which frustrates reinsurers and undermines rather than enhances their confidence to write the business.

- Brokers act as **relationship mediators**, ensuring that clients have a suitable spread of reinsurers on their books, and that reinsurers gain access to all relevant business in the most efficient way. Good relationships are those in which the broker has deep knowledge of the reinsurer's book of business and appetite for growth in particular areas. A wholesale broker may be in a better position to understand and serve the reinsurer's interests in seeing an appropriate range of business.

While both broking roles are important, their extent and nature varies according to the type of relationship they mediate. It is imperative for brokers to understand the type of relationship that will add value between clients and the different reinsurers on their panel. Brokers should rank different reinsurers according to their significance on their client's programme and score their clients according to the information concerns that they expect from reinsurers. They can then identify the required relationship type and support appropriate engagement, using the categories in the relationship portfolio matrix (Figure 3)

Holding relationship	Grooming relationship
• Brokers act as relationship mediators. Clients benefit from brokers' ability to attract relevant reinsurers to their roadshow, based on their knowledge of reinsurers' risk appetite. • Reinsurers will give time where brokers use focused intermediation to add value; they trust a broker to show them not all business, but all relevant business.	• Brokers act as relationship mediators by ensuring that high-value cedents and reinsurers with robust capacity have sufficient high quality and exclusive social time to build strong relationships. • Brokers must manage the signing process so that relationship partners are rewarded for their loyalty and clients get the desired spread of supporters.
Watching relationship	**Probing relationship**
• Brokers act as information producers, by packaging information in usable ways; including pushing the client for improved information that meets underwriter expectations. • Face-time with reinsurers should be appropriate to client value. Brokers can interact with these clients and mediate deals until such time as information quality and value warrant a conference meeting with reinsurers.	• Brokers act as information producers to ensure that contextual factors are communicated in ways that inform underwriters' judgement. • Brokers must maximise the value of client visits by preparing the client to make relevant practices transparent and accessible. A retail broker's deep client knowledge guides attention to those underwriting practices that instil confidence in the client.

Recommendations for developing a portfolio approach to relationships

Evaluate clients on two dimensions: information quality; and current and potential value

Use client evaluations to determine into which of four ideal types a relationship belongs and allocate face-to-face engagement time accordingly

- Watching: Conference meetings
- Holding: Roadshows
- Probing: Client visits
- Grooming: Corporate entertainment

Brokers enhance the value of relationships by acting as:
- Information producers for reinsurers;
- Relationship mediators to bring together clients and reinsurers in ways that meet their informational and competitive objectives

3.3 Appraising risks
Risk appraisal is a complex process. It depends on the likely occurrence of an event, such as a natural peril that, as an extreme and rare event, is hard to model, and also on variables that are determined by the cedent's book of business and its projected change. Risk appraisal is not only complex, but also the central activity in the reinsurance trading process. It builds on the processing of submission information, and provides the basis for underwriters' quoting prices as well as the ultimate authorisation of specific line sizes and layers. As explained in Section 1.4, which compared the initial impressions of a risk arising from different workflows, we identified two dominant approaches to evaluating risk:

- Analytical assessment
- Contextual judgement

Analytical assessment of a risk
Analytical assessment of a risk rests on a quantitative analysis of the factors that constitute a specific risk, such as total insured values, territorial scope, nature of cover sought and its relative measurability in terms of a potential loss. The dominant instruments for analytically assessing a risk are vendor models and in-house tools.

In line with tightened regulation and underwriting guidelines, mathematically-derived **vendor models**, such as RMS, AIR and EQECAT, have a strong impact upon risk appraisal. They produce loss estimates with regards to specific perils and help to establish a 'technical' price for a defined risk relative to similar other risks. While vendor models support technical evaluation, their results should be interpreted cautiously. They strongly depend on the accuracy and detail of the underlying data, which lacks quality in many territories. Most firms thus also use **in-house tools** as a supplement to or substitute for vendor models. These are typically benchmarking tools that enable historical year-on-year analysis, comparison of risks within and across regions, and appraisal of their return on equity by programme and by layer, ideally in relation to some overarching firm-level expectations of profitability.

"I stress test with our model which takes RMS and lets me add different factors to load aspects of it. I am just checking to see whether certain types of events would push the exposure up the layers, or what impact they would have"
(Bermudian Underwriter)

Shortcomings of analytical assessment
Rigorous analytical assessment of a risk is only possible when three key weaknesses are considered: i) skewed outputs and model error; ii) data availability; and iii) data accuracy. Vendor models and in-house tools enable numerical comparisons that are important for transparent technical risk pricing. However, their outputs need a well-informed interpretation that considers a model's underlying variables, the weightings that skew its results, and data quality. Indeed, all firms have ways of supplementing vendor models with their own analytic interpretations, which can be quantified. With the accuracy of models in question, outputs also depend on the availability and quality of other information for performing analysis.

Contextual judgement of risk
Contextual judgement involves evaluating a risk in its own particular relationship context, taking into account soft factors that give confidence beyond the risk's technical analysis. Contextual judgement of a risk is crucial to counteract information deficits. There are three dominant approaches: i) market intelligence; ii) cedent analysis; and iii) capacity check.

Market intelligence is a soft factor in which risk appraisal is influenced by people's perceptions of **trends**, such as whether it is a soft or hard market, and **market rumours**, for example about significant losses, or programmes where payouts are anticipated. Market intelligence is also shaped by supply and demand or the **market capacity** for a specific reinsurance product.

Cedent analysis is another contextual factor, which can be somewhat quantifiable. For example, a **strengths and weaknesses analysis** can evaluate a cedent's ratings, market share, and aspects of governance and financial strength. It is also important to consider the **longevity of the relationship**, in terms of the balance of incoming and outgoing payments over several years. These factors should be considered in relation to the **value of the specific cedent's business** within the overall firm portfolio (see Section 3.2).

Finally, a **capacity check** ensures that the portfolio is balanced through a range of non-correlating business. The attractiveness of any risk varies according to the extent to which a firm has capacity in any particular region or class of business.

Shortcomings of contextual judgement

While contextual judgement criteria give confidence beyond the risk's technical analysis, there are two major weaknesses: i) lack of hard information to base a justification on, resulting in; ii) absence of a consistent approach to appraising risks. While some of this judgement will always be subjective, some contextual factors can be 'measured', so that there is a trail of evidence for trading decisions. These rationales for writing a risk should be logged in an in-house information system. Storing this information provides a basis to transfer skills and valuable contextual knowledge within a team, rather than residing within 'the head' of an individual underwriter who 'knows' the cedent or the risk.

"There is quite a lot of subjective judgment that we may be using but it's not something that I would do on my own. I'd have a chat with [my colleague]; get him to just double-check that he thinks it's a sensible decision or even with our Chief Underwriting Officer if it's one of our major programmes" (Lloyd's Underwriter)

Integrating approaches to appraising risk

Both analytic assessment and contextual judgement are necessary to comprehensively appraise risks. In order to address the weakness of over-reliance on one or the other, we suggest an integrative approach to appraising risk.

Analytic assessment is a constant. It must be performed in order to demonstrate the transparency of risk-taking from a regulatory perspective. It also provides an important technical basis for benchmarking and evaluating risks during the quoting and authorisation phases of the trading process. While vendor models are widely perceived to be inaccurate and no firm uses them without internal methods to accommodate soft factors, they are still useful as benchmarks to support analytic judgement. Even where vendor models are not available or lack sufficient information, some internal method of analysis is performed. In addition to modelling, analytic assessment is supported by comparative analysis to benchmark from year-to-year and from risk-to-risk within particular regions.

"We are model-driven in a way, but we don't take them as gospel. We use them as appropriate" (Bermudian Underwriter)

Contextual judgement of a risk attaches more weight to a range of soft factors, such as wider market effects and cedent analysis. It is particularly likely to be influenced by interactions with the cedent, in order to understand the quality of the data and the relative value of that cedent within the firm portfolio (see Section 3.2). It is also influenced by the social network effects of appraising the market through interaction with peers (market trends, market capacity and market rumours). Contextual judgement provides reasoning for prices and justification for writing or declining risks at a particular price threshold. Much of this contextual judgement can be captured in standardised indicators that may even be quantified for use with in-house models or to weight the output of vendor models. While some contextual judgement is valuable for most risks, it is essential to adequately appraise those risks that are complex or lacking information.

Integrating analytic assessment and contextual judgement addresses the shortcomings of either approach if used in isolation. Provided that information is available, analytic assessment of a risk offers technical pricing and benchmarks on the basis of scenarios and other comparative analyses. In the case of information deficits, contextual judgement of the cedent offers another angle for assessing risks. It complements and may even substitute for analytic assessment. Such analysis enables differentiation of risks that may look very similar on the basis of modelled results but differ hugely in their underlying organisational processes, such as claims handling. Combining analytic assessment and contextual judgement overcomes skewed results from vendor models and in-house tools focused on retrospective loss data, while also ensuring a technical basis for evaluating risks. It provides a framework to assess cedents and their risks on a stand-alone basis and/or to compare risks across classes of business and territories.

Both analytic assessment and contextual judgement need to be integrated systematically for a comprehensive appraisal of risks.

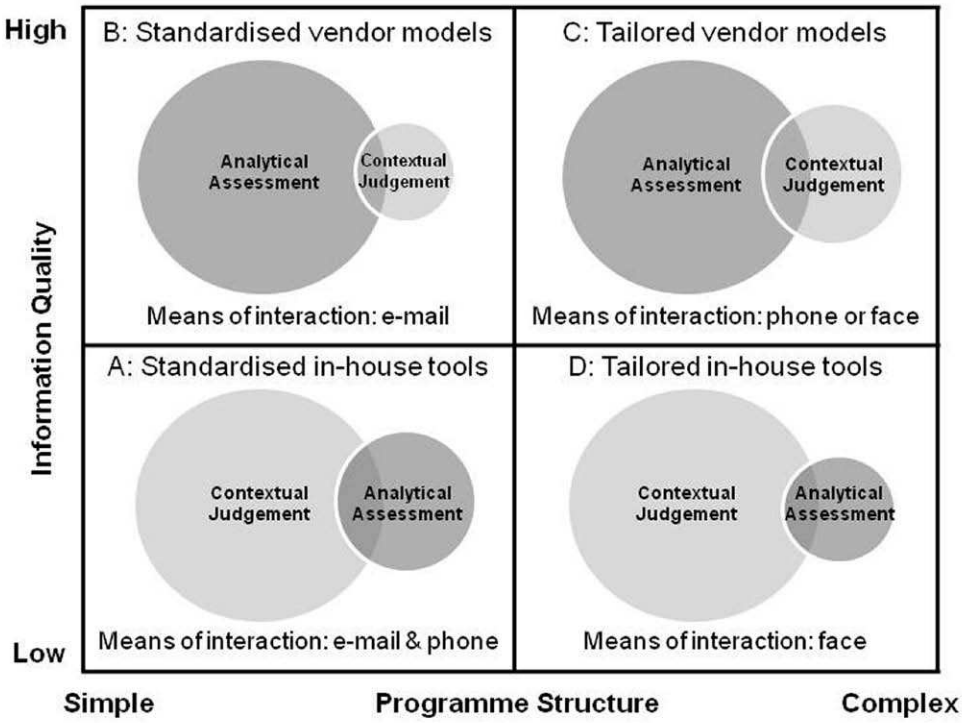
Integrating analytical and contextual judgement highlights the need for **skills that go beyond the use of spreadsheets and mathematically derived models.** The development and transfer of skills and knowledge in using both forms of evaluation is essential to the trading process. Systematic integration of approaches enables reinsurers to diversify into classes of business and territories that do not have good quality vendor models but require creative solutions to complex risks.

Classifying risks and interaction according to analytic properties

The risk evaluation matrix, Figure 4, provides a way to classify risks according to their information quality and the relative complexity of the programme structure, and to allocate email, phone or face interaction accordingly to help understand the risk. As indicated by the size of the 'bubbles', the lower the information quality, the more contextual judgement is required to supplement analytic assessment. Similarly, the more complex a programme structure, the more contextual judgement will be required to supplement analytic assessment, even in the presence of high-quality information. Taken together, these two dimensions indicate the extent to which risk appraisal can be standardized or needs to be tailored.

Generally, when a programme structure is simple, it can be transacted by email whereas when it is complex, it requires more direct information, such as phone or face to discuss the specifics of the programme structure. However, the extent of interaction is mitigated by information quality, as more direct interaction is required to supplement information deficits. Overall, the aim of systematic risk evaluation is to improve the quality, efficiency and transparency of decision-making. The risk evaluation exercise results in four generic types:

Figure 4: Risk classification matrix



Quadrant A

- Risks lack sufficient information to be analysed with vendor models but can be appraised through **standardized in-house tools** that are strongly grounded in contextual judgement.
- Information that supports contextual judgement can be provided by **email and phone**.

Quadrant B

- These risks lend themselves to strong analytic assessment, typically through the use of **standardized vendor models** weighted according to standardized in-house loadings for particular regions and perils so that these may be uniformly applied to vendor models.
- **Email is sufficient interaction** to transact on these risks.

Quadrant C

- These risks are best dealt with by **tailoring vendor models** to perform information-rich analysis that is loaded for factors arising from contextual judgement of both the risk and the cedent.
- The complexity of the structure necessitates direct interaction, even where information is high, indicating either **phone or face to support evaluation** of the risk.

Quadrant D

- These risks are difficult to assess in any standardised form, but should still be analysable through a range of in-house tools. Hence, they lend themselves to evaluation through **tailored in-house tools**.
- **Face-to-face interaction adds most value** as it enables the risk to be evaluated and a structure for reinsurance cover to be generated through discussion between a broker and underwriter.

Recommendations for evaluating risks

Enhance analytic assessment:
- Systematize information processing to enhance comparability
- Standardize the weighting of vendor models where appropriate to particular types of perils and regions

Strengthen contextual judgement:
- Develop measures and weightings of contextual factors where possible
- Systematically record both soft and measurable contextual factors of a risk in an in-house database

Evaluate risks according to their relative information quality and the degree of programme complexity.

Standardize risk analysis where appropriate, using either in-house tools or vendor models, whilst ensuring that tailored analysis can be used for those risks to which they are most suited.

3.4 Selective application of face-to-face and electronic interaction

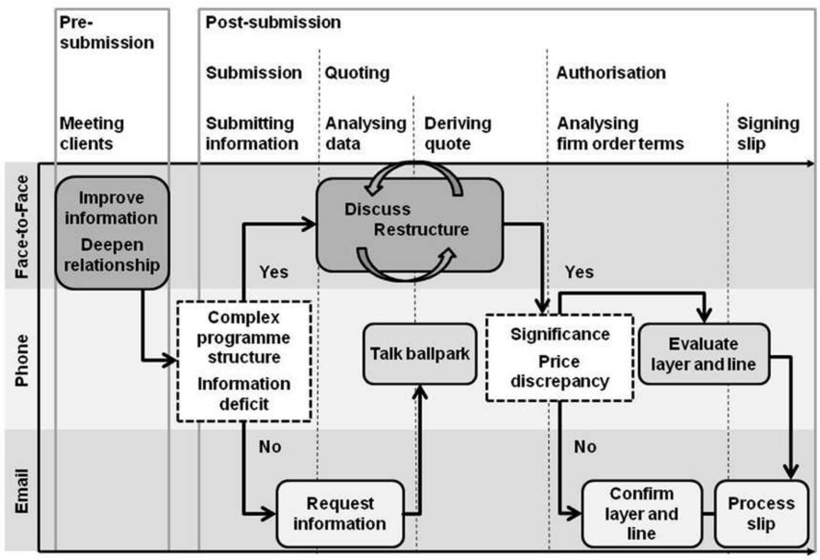
As face-to-face interaction is a costly resource, it should be used where it adds value and substituted with email or phone where these are equally valuable. Figure 5 is a process model that indicates those phases in the trading process when face, phone or email adds value. **Client meetings** should involve face-to-face interaction, as face is valuable for establishing trust; particularly in the early phases of a relationship (see Section 3.2). The **submission** should always be emailed to minimize duplication of paper and electronic information. The extent to which submission requires an accompanying face or phone discussion depends upon the information quality and relative complexity of the risk (see Section 3.3).

During the **quoting phase**, interaction varies:
- Simple risks, or those with good information, can be largely transacted by email with a phone call to garner market intelligence about the ball park in which to position the quote.
- Face can be very valuable when the risk is complex and/or there is an information deficit. Here face-to-face interaction enables underwriter-broker negotiation in order to structure the deal and derive an appropriate quote for the market conditions and nature of the client.

When the **firm order terms (FOT)** are ready, the need for direct interaction declines. There are three main indicators for varying interaction in this phase.
- If this is a significant decision in terms of size and capacity for the reinsurer, a phone conversation may help to establish specific aspects of the line and layer, particularly the likely signing.
- If there is a substantial downward price discrepancy between the quoted price and the FOT a telephone call can establish any reasons that might still make the risk favourable to write, the potential for any changes in price, or the size of line and layers that the reinsurer might want to write given the lower price.
- For risks that are relatively small in the reinsurer's portfolio and those where the FOTs are relatively consistent with the quoted price, there is no reason for anything other than email interaction.

Finally, there is very little value in anything other than email interaction for **processing the slip**, which is simply the logical end to a business transaction. Thus, as shown in Figure 5, face is a variable of the trading process that does not need to be uniformly applied.

Figure 5: Selective use of face-to-face and electronic interaction



The value of face declines throughout the trading process

Face adds:

- Most value in the early phases of the trading process, particularly at the pre-submission phase of meeting the client;
- Value in the submission and quoting phases of complex risks or those with an information-deficit;
- Little value in the final phases of the underwriter process, particularly in processing the slip.

Section 4 Recommendations: Modularisation

In this section, the trading process is broken down into modules of activity, and best practices for brokers and reinsurers are identified in each module. These best practices bring together our recommendations for relationship evaluation (Section 3.2), risk appraisal (Section 3.3) and selective application of face, phone and email interaction (Section 3.4). Modularisation pinpoints problems in specific stages of the workflow, improves process management and generates links between related activities. Reinsurance firms and broking houses can use this modularisation process as a guide to evaluate and/or change their current practices.

Modularising the reinsurance trading process

Modularisation ensures that risk trading decisions are put on a solid and transparent information basis with clear feedback loops between each phase of the trading process. In order to assist with critical evaluation of current practice as well as subsequent change implementation, we provide an overview map of the entire trading process (Figure 6) and then detail the individual modules in each phase and how they interlink (Figures 7-11).

Figure 6 maps out the entire risk trading process according to its five constituent phases: **Pre-Submission, Submission, Quoting, Authorisation and Quality Control.** This figure:

- Illustrates the **specific modules** that constitute each phase, the activities that they involve and how they interlink.

- Differentiates between modules that describe **General Activities, Appraisal Points** and **Mandatory Gateways** in each phase.

- Demonstrates that the **risk trading process is cyclical**, as the review of placement decisions and processes from one renewal season creates a feedback loop that inputs into the next season.

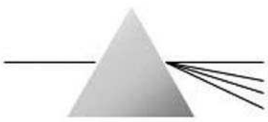
- Shows that **Quality Control** needs to be a distinct phase of the process that will facilitate regulatory compliance and enhance process optimisation, information sharing and portfolio management.

Each of the modules is denoted by a different shape, for easy identification of its generic purpose, as follows:

General activities

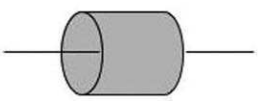
General activities describe those **operations necessary to move the trading process along.** Outputs from one activity form inputs for the next. This type of module includes relationship evaluation, client meetings, information management, broker preparation submission and the submission itself.

Appraisal Point



Appraisal points denote those **junctions** at which underwriters **consciously decide how to move the process along most efficiently.** Based on an evaluation of, for instance, the purpose and type of client relationships, they select a course of action from a range of possible alternatives, such as type of client engagement.

Mandatory Gateway



Mandatory gateways highlight the 'hoops to jump through'. They describe activities that should occur before the risk trading process can enter the next phase. Putting in place mechanisms which ensure every piece of business passes all mandatory gateways, **strengthens systematic risk evaluation, improves transparency of decision-making, creates a reliable audit trail and generally improves compliance with regulatory demands.**

Each of Figures 7 to 11 focuses in detail on one of the five phases of the risk trading process identified in Figure 6. They describe the individual modules for each phase as well as different ways of performing them based on assessments made at previous appraisal points. They also identify different module-specific best practices that apply to either underwriters or brokers. Colour coding in the figures is related to the colour coding of the original sections in which we developed recommendations for change, so that it is easy to refer to these corresponding guidelines for relationship evaluation (Section 3.2), risk appraisal (Section 3.3) and selective application of face, phone and email interaction (Section 3.4). These process maps are intended to be a guide for reinsurers and brokers in evaluating and potentially changing their current practices.

Pre-submission

Pre-submission covers all those activities at the beginning of a renewal season that precede the preparation and hand-over of submission documentation. Every renewal season should start with a **relationship evaluation** that results in the scoring of particular relationships (see Section 3.2). The composite score feeds into the first appraisal point at which brokers and reinsurers determine the appropriate form of **client meeting** based on their relationship objective. The meeting format, in turn, generates particular types of information that is relevant to those objectives. Subsequent **information management** should aim to systematically record and store the information from client meetings, making it widely and easily accessible throughout the company. Finally, for management information and transparency purposes, it should be mandatory to log this appraisal in a formal **evaluation record** before transitioning to the submission phase.

Submission

The submission phase starts with the **submission preparation**, which is a broker activity. It then moves to **appraising the risk** for information quality and structural complexity (see Section 3.3). This enables brokers and reinsurers to determine the extent of standardization or tailoring a risk is likely to need and, hence, the extent of direct interaction that they will need. Finally, **submission processing** should include the systematic logging of incoming submissions in electronic databases in order to ensure a rigorous audit trail. Once incoming submissions are logged they can be forwarded to modellers for analytical assessment, ideally accompanied by explicit guidelines about any specific factors to account for in the analysis.

Quoting

The quoting phase starts with **processing the analysis** when underwriters receive it from the in-house analysts. Receipt of the modelling triggers **appraisal of the analytical output** in terms of complexity and need for restructuring of the deal, which inform the extent to which face, phone or email broker-underwriter interaction is needed for **decision making** (see Section 3.4). These analyses and discussions then inform **formal quoting**, during which underwriters establish their quote price (or price indication for non-quoting markets), secure the appropriate level of underwriting authority and submit their formal quote electronically. Again, it should be mandatory at the end of this trading phase to produce formal **documentation** of the underwriting decision, together with key information on analytic assessment and contextual judgement underpinning the decision.

Authorisation

For brokers, the authorisation phase begins by collecting and **processing quotes**. They present quotes to the client and agree on firm order terms (FOTs). **Processing FOTs** then constitutes the start of the authorisation phase for underwriters. During **appraisal of FOTs** underwriters assess the significance of i) any discrepancies with the quoted price; ii) their line size in relation to capacity (see Section 3.3); and iii) the relative value of the cedent (see Section 3.2). This appraisal determines the extent to which broker interaction is likely to add value for **authorisation**. While the deal is done with the written line, **contract certainty** must be established as soon as possible, as a mandatory gateway, and the signed line should be logged promptly for effective exposure and capacity management.

Quality Control

Our study showed that there is typically little space for systematic quality control once a risk is written or a renewal season comes to an end. **Process reviews** of how deals flow through the company are sporadic. **Risk reviews** usually occur after a risk has been written, are sometimes suspended altogether when deadlines loom, and generally do not provide serious scrutiny of written and declined risks against any wider client, risk or portfolio evaluation. However, on those occasions where risk reviews do occur, even in a relatively ad hoc fashion, they provide valuable points for learning and knowledge transfer from the individual underwriter or broker on the risk to other members of the team. If they were also systematically recorded, they could be added to and accessed on an annual basis, so building a knowledge repository. In the interest of: compliance; management information quality; process management; learning opportunities; and knowledge transfer, we recommend that firms should integrate these quality control modules into the risk trading process. This approach to quality control also facilitates **portfolio analysis** completing our last mandatory gateway. This gateway establishes the feedback loop that transforms the outputs of one renewal season into inputs for the following one.

Figure 6: Modularised process map of the risk trading process

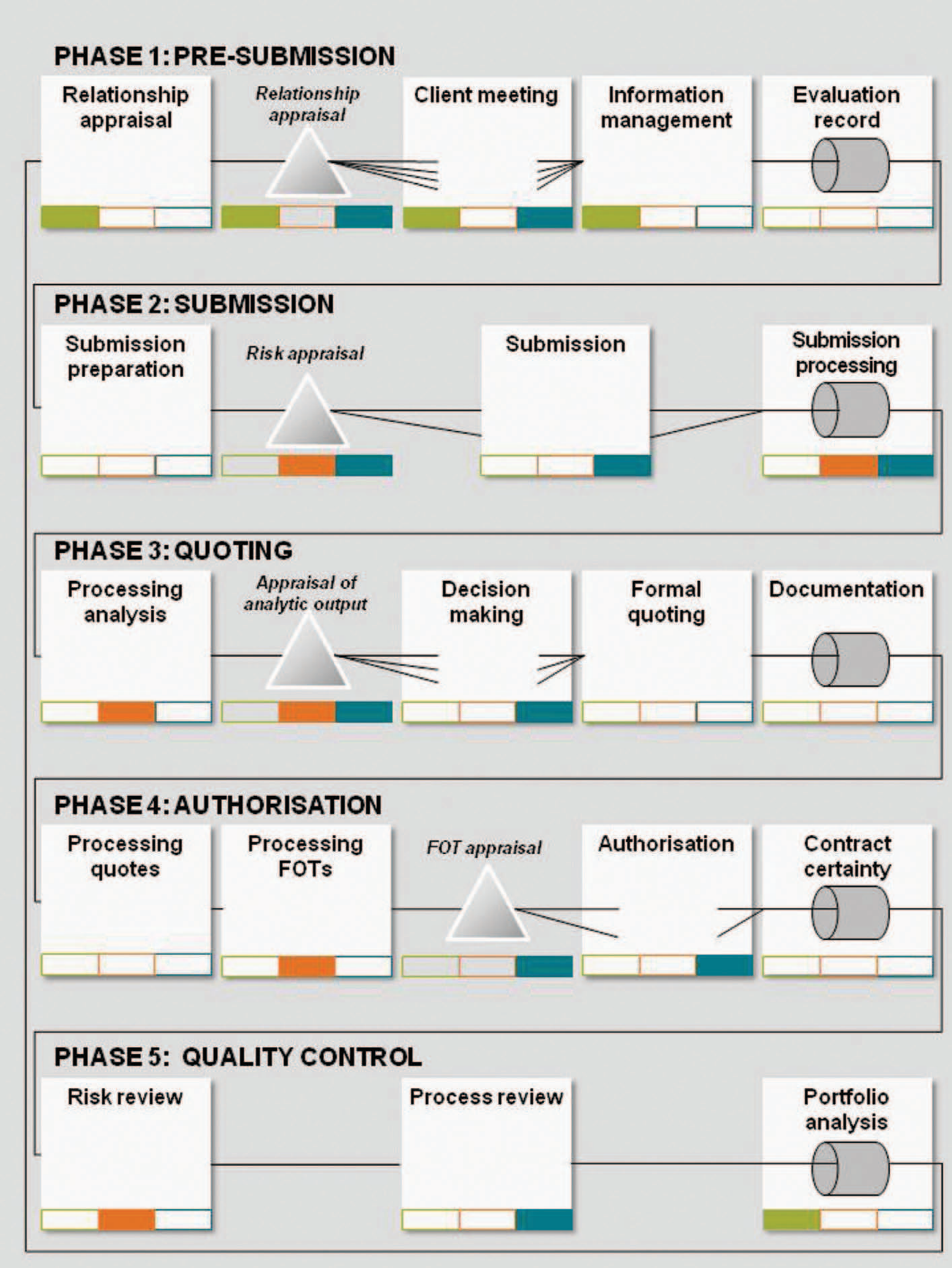


Figure 7: Phase 1: Pre-submission

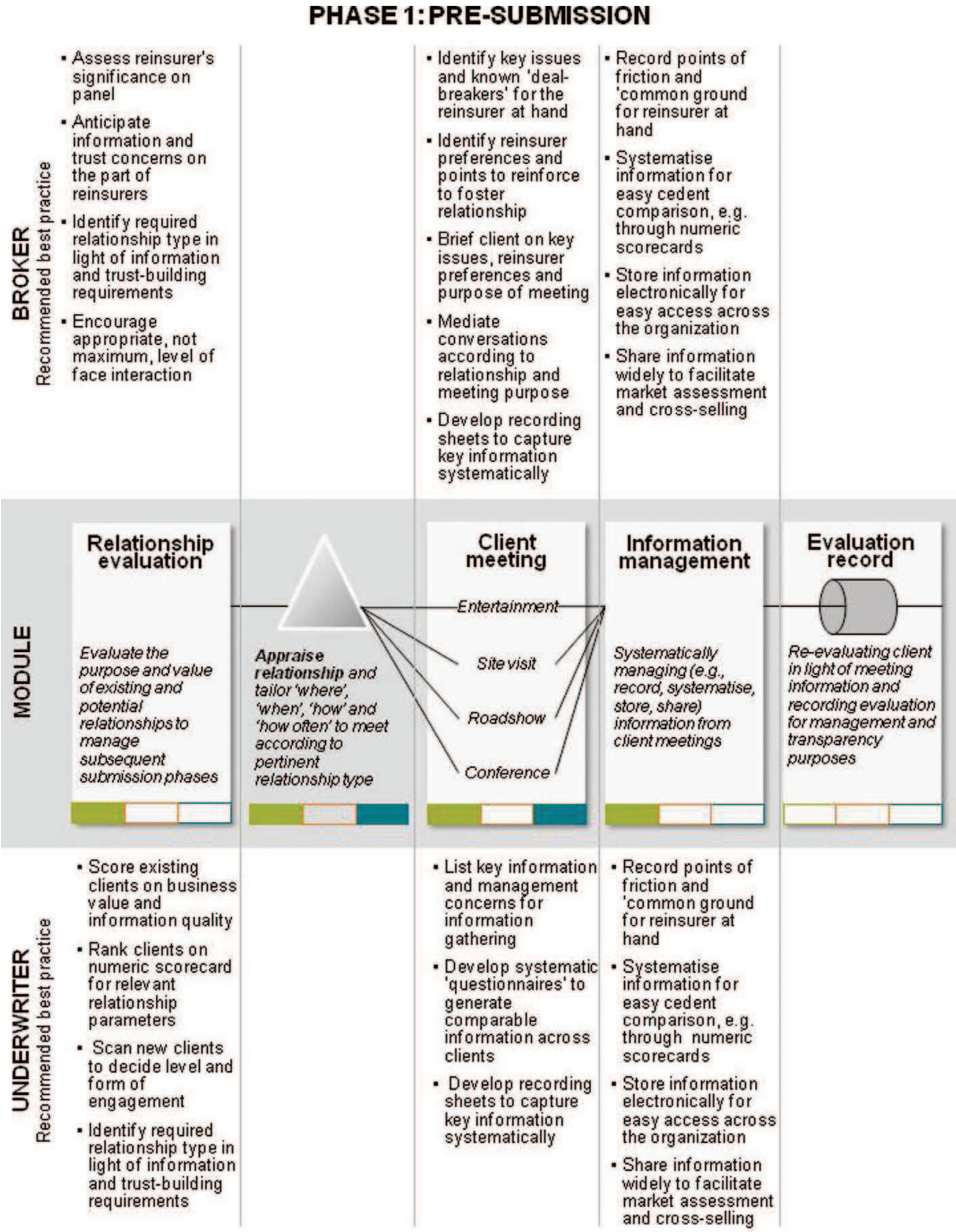


Figure 8: Phase 2: Submission

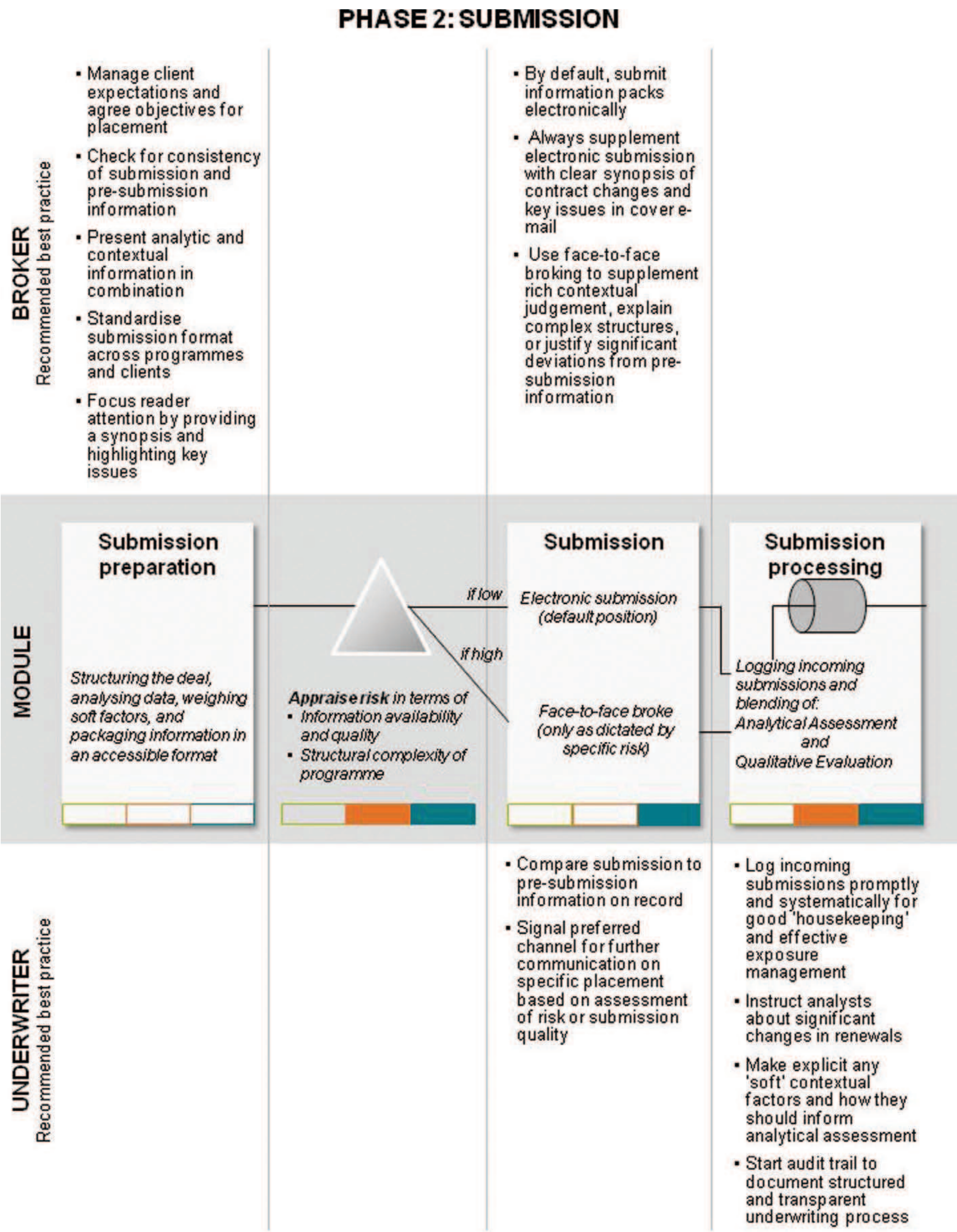


Figure 9: Phase 3: Quoting

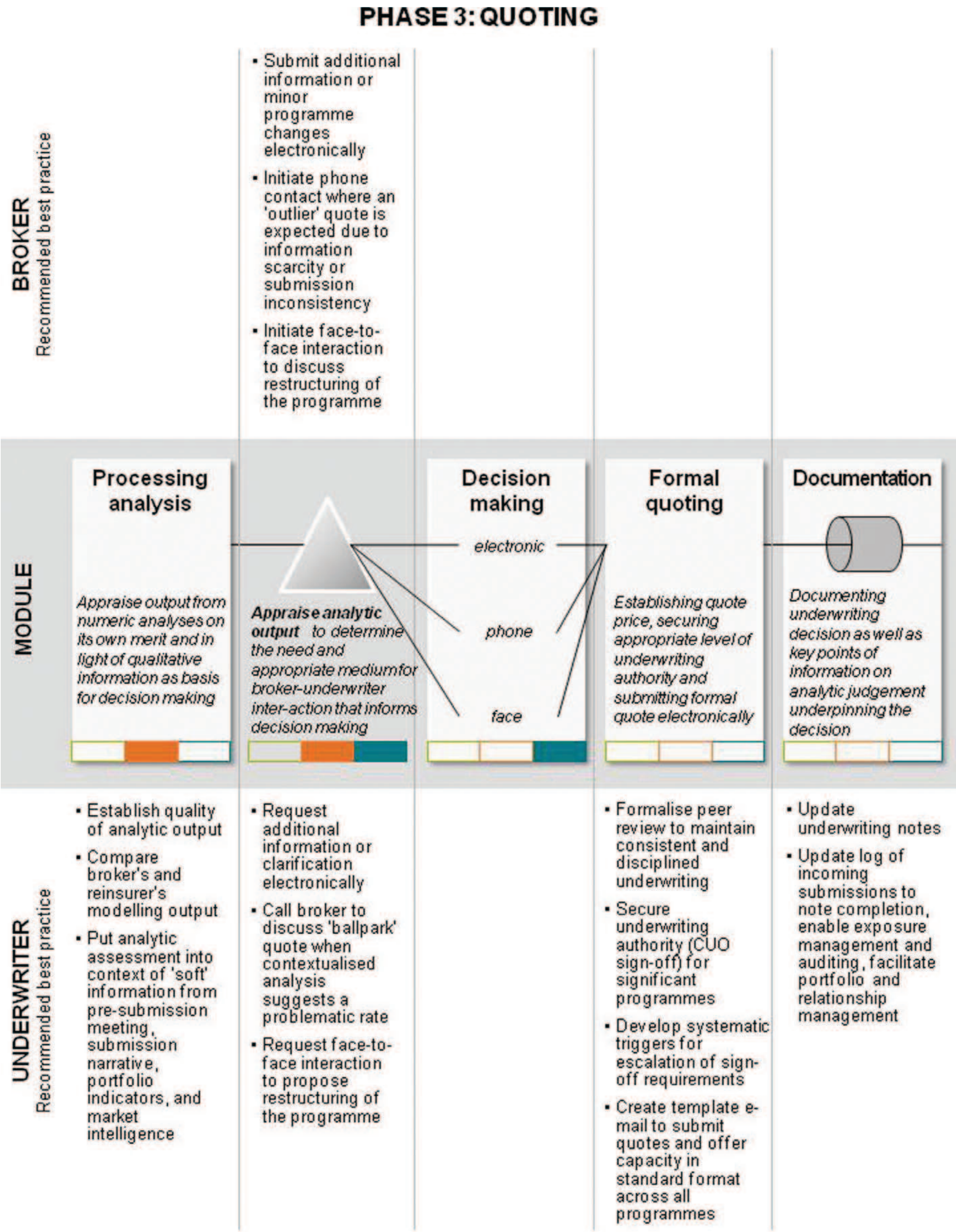


Figure 10: Phase 4: Authorisation

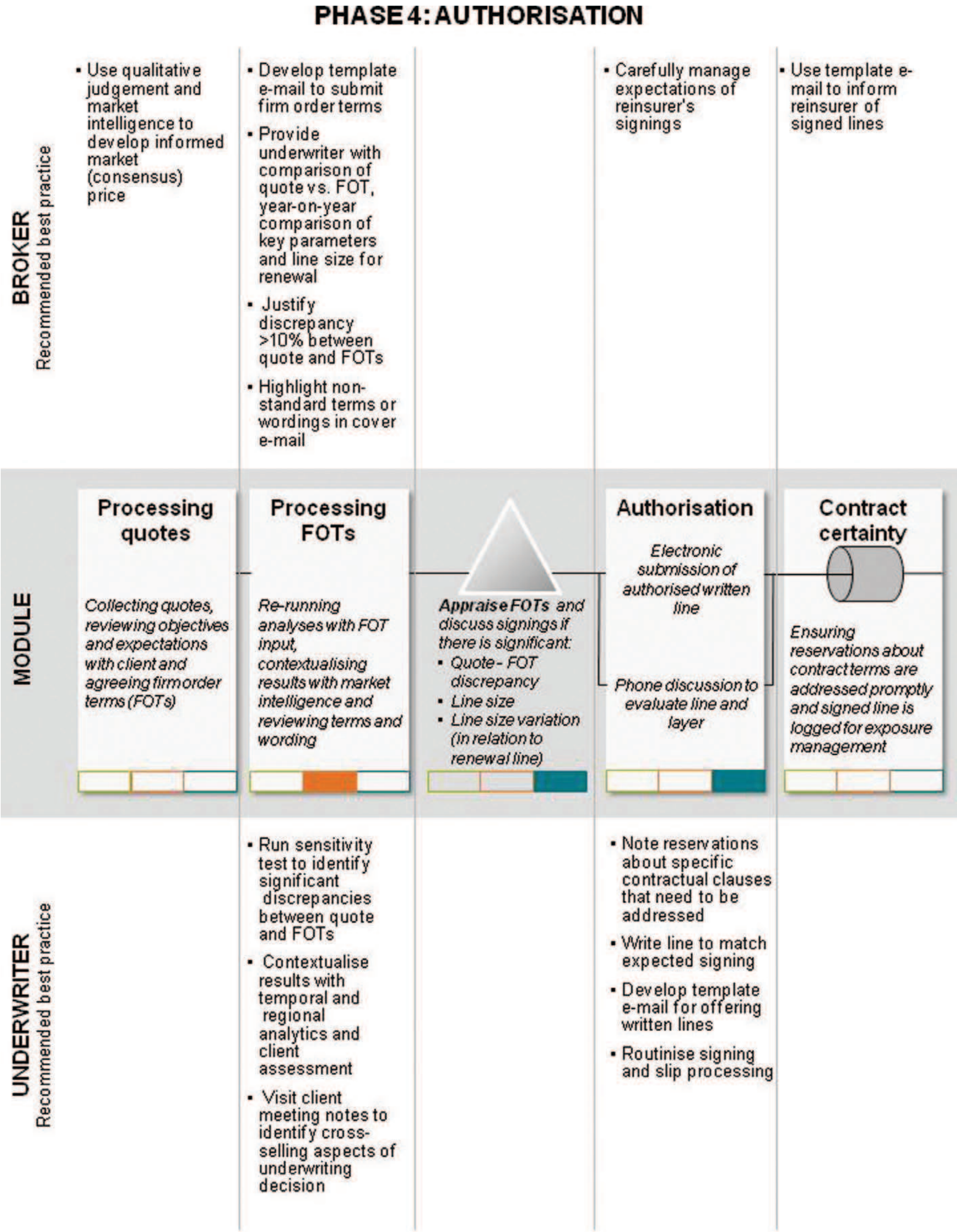
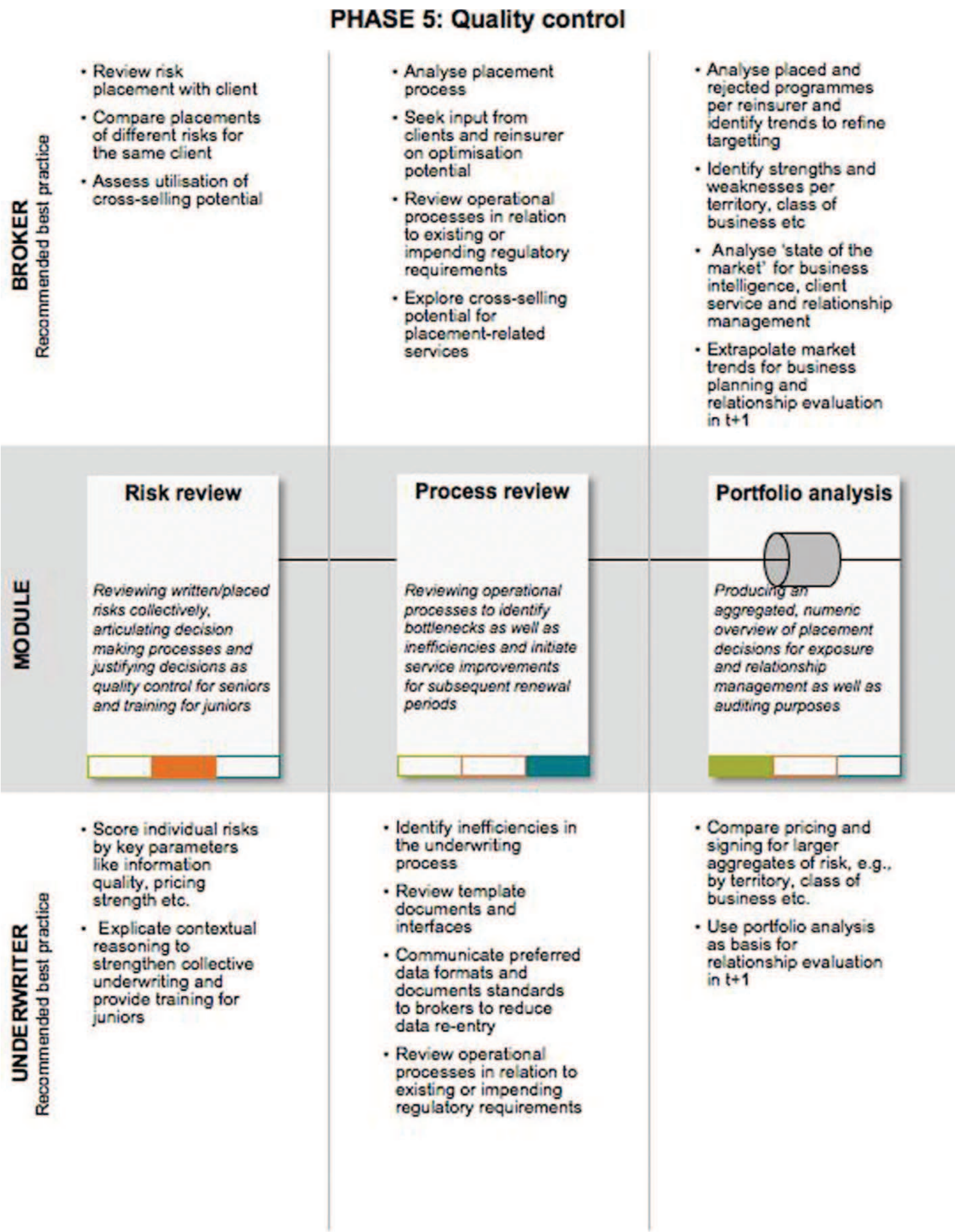


Figure 11: Phase 5: Quality Control



Conclusion

The reinsurance industry is in a period of transition arising from technological change, convergence in global markets, and an increase in technical bases for evaluating risk. These changes are shifting it from a ‘craft industry’ based on individual skills and relationships, to a more professional set of transferrable skills and business-to-business relationships. However, the shift to professionalization is still occurring largely through natural evolution, rather than purposeful strategic change. The recommendations from this study can support reinsurance firms and broking houses in systematically strengthening their trading practices in order to capitalise on the opportunities afforded by industry-level change.

Specifically, they can better evaluate relationships, using a portfolio approach that enables them to allocate attention, resources and effort according to the value of any specific relationship. Risks can be classified according to the extent to which they require standardised or tailored approaches to analysis and pricing. This will ensure that the best quality of decision-making is applied to those risks where it is most warranted. Finally, face-to-face interaction is a scarce resource that should be conserved for those parts of the trading process where it can add the most value. The process models developed in this report enable brokers and underwriters to distinguish when it is most effective to apply face-to-face or electronic interaction throughout the trading process.

These specific recommendations can be strengthened by incorporating them into a modularised process that enables clear links between the different activities in the trading process. Effective modularisation will support the growing professionalization of the reinsurance industry.