Decryptioning Insurance
Broking through Blockchain

Blockchain technology could help brokers maximize their operational efficiencies by using smart contracts to automate key processes, freeing them to focus on value-added services that drive customer loyalty.
EXECUTIVE SUMMARY

With increasing regulatory complexity and heightened cost sensitivity, the nature of risk in the insurance industry is becoming more diverse and complex, making the role of insurance brokers more challenging and vital than ever before. Beyond selling insurance, the role of brokers today continues well after a policy is sold and extends into risk advisory, as the broker counsels clients throughout the lifecycle, from purchase through claims settlement and beyond.

The evolution from seller to risk manager hasn’t been easy for most brokers. Technologies such as robotic process automation (RPA) and artificial intelligence (AI) solutions have helped ease the transition; however, the way brokers manage large and complex deals hasn’t kept pace with the rapid scale of digital business transformation. Complex wholesale broking deals are still managed on SharePoint servers and Excel spreadsheets, making them difficult to trace during policy renewals and susceptible to being buried under the voluminous paperwork that brokers contend with. From our engagements with multiple wholesale brokers working on large and transformative deals, with risk dispersed across multiple geographies, we see three common themes of discontent:

• **Information asymmetry** with respect to movement of information.

• **Poor audit trails**, with no accountability from a compliance perspective.

• **Rekeying of the same data** by different parties, reducing productivity.

Such deficiencies limit broker performance, trapping them in archaic processes and distracting them from providing valuable client services. To ensure relevance in the future, brokers need a solution that enables them to focus on information rather than on data.

This whitepaper breaks down the end-to-end broking business process into smaller parts. We then showcase how each step in a complex wholesale broking deal is riddled with information asymmetry caused by the involvement of multiple parties. We then offer
recommendations on how to solve this challenge through the application of blockchain technology. In our view, blockchain technology can bring everyone involved in the deal onto the same platform without being physically colocated and remove information barriers while still retaining the traditional flavor of face-to-face negotiations.

Blockchain allows multiple parties involved in the lifecycle of a deal to be part of the virtual deal room at different times and view information depending on their permitted level of access. Since collaboration is the backbone of the solution, we have also highlighted how a group of parties working toward a common goal of achieving operational efficiency will each derive benefits at different times during the deal lifecycle.

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BLOCKCHAIN: A QUICK OVERVIEW

Blockchain is a decentralized software mechanism that enables a public distributed ledger system (see Figure 1). The technology allows assets and transactions to be tracked and recorded without the involvement of a central trust authority such as a bank. Blockchain networks create proof of ownership by using unique digital signatures that rely on public encryption keys known to everyone on the network and private keys known only to the owner.

Complex algorithms drive consensus among users, ensuring that transaction data cannot be tampered with after verification, reducing the risk of fraud. These networks also enable peer-to-peer exchange of data, assets and currencies through rules-based smart contracts in a more efficient, transparent and cost-effective manner. Once created, smart contracts execute automatically once their terms are met, without the need for human intervention.

Blockchain platforms can be public (i.e., permissionless) like Bitcoin, which allow anyone to submit a transaction and take part in validating other transactions. They can also be private (i.e., permissioned), where only authorized individuals participate in sharing and validating information. (For more on blockchain and how it works, see our e-book “Demystifying Blockchain.”)
The nature of broker-client or broker-carrier interactions has evolved, owing to the increasingly complex nature of risk.

In the world of complex wholesale broking, innumerable assets change hands, starting from the deal's initiation, to the issuance and servicing of the policy, all the way to claims handling. To understand where blockchain and smart contracts fit, it is important to first dissect core broking processes, such as the placement of risk and settlement of accounts, to understand and resolve their deficiencies.

INSURANCE BROKING’S PAIN POINTS

From its humble beginnings in 1686 by Edward Lloyd, the insurance business has certainly come a long way. While the fundamental tenets of insurance broking have remained unchanged, and brokers continue to be the eyes and ears of insurers, the nature of broker-client or broker-carrier interactions has evolved, owing to the increasingly complex nature of risk. While insurers often get to view only a part of the risk they are attached to, it is the insurance broker that has visibility into the end-to-end risk. The broker’s role is further challenged by large and complex deals that transcend geographies, regulations and time zones. In these cases, the broker’s role is amplified because clients expect the same level of service in each geographical area where they have to insure a part of their risk.

The use of selling tools that pivot around predictive analytics and market intelligence data has helped to modernize core placement processes within the broking lifecycle; however, servicing, which is an equally important part of the broking process, hasn’t experienced the same level of technological advancement.

Even though simple placement tools do solve part of the problem, they don’t address the bigger issues that arise from large deals involving multiple brokers and carriers. On such large deals, information flows from multiple sources intended for multiple parties via brokers. Hence, a common problem theme across the broking lifecycle is information asymmetry.

In the following section, we break down the problems and challenges at each stage of the wholesale broking process for a large and complex broking deal, where the risk is placed across geographies with both admitted and non-admitted carriers. While in reality, multiple brokers interact with as many as 30-plus carriers on a deal, we assume for the sake of simplicity that the interaction is one-to-one between broker and carrier. The magnitude of complexity in such a simple transaction is an indicator of how complex the actual flow of information can potentially be when the broker-carrier interaction becomes one-to-many.
The Placement Process

The initiation of the placement process depends on the business type. For new business, the client is subjected to know your customer (KYC) and anti-money laundering (AML) checks, while the broker simultaneously reaches out for quote options from the market. For renewal business, brokers reach out to incumbents and new markets for quote options (see Figure 2).

Deconstructing the Placement Process

- **Client**: Initiate purchase of insurance with lead broker.
- **Lead Broker**: Seek risk-related information.
- **Regulator**: Approach for access to non-admitted carriers.
- **Admitted Carrier**: Provide quote document.
- **Local Broker**: Provide quote documents.
- **Non-Admitted Carrier**: Share quote received by non-admitted markets to lead broker.

All information relayed via the lead broker only.

Aggregate and present an overcapacity view of the risk to the client after gathering quote information so that carriers can be signed down if needed and managed.

Approached for reasons like cover, capacity, price, etc. Any negotiation during the placement may involve multiple information exchanges between the two parties without the lead broker in the loop.
Key deficiencies in the current placement process include:

- The client creation process requires KYC and AML checks that can take weeks, which keeps the placement process from progressing toward deal closure.

- The same KYC/AML is performed again by carriers, which insure the risk of clients. This leads to duplicate efforts and additional operational overhead.

- Delays are caused by the continuous data exchange between local and lead brokers through traditional means. These exchanges are due to regular updates to risk layer details (based on market demand), as well as quotes attached to those layers due to negotiations that occur with carriers at every layer.

- Because maintenance of the risk structure is dependent on lead brokers, all data must be relayed back to the lead broker. This results in time-difference delays, as well as inconsistencies stemming from the lag in updating the risk version by the lead broker so that it’s available to brokers from other geographies.

- Rekeying of data, in addition to inadequate and delayed communication across the team, causes further inefficiencies, delays and issues.

- Key information is not available, as the submission version cannot be tracked, and reporting capabilities are poor.

- Because local markets coordinate with local brokers, any information that must reach the lead broker is transmitted via a local broker, further delaying the process.

A potential solution is for all parties to collaborate so that risk- and quote-related information can be exchanged freely (with exceptions) without any dependency.
Bind Order

After the negotiations are locked and the signed percentages for each carrier are agreed to, brokers provide a bind order to carriers, which initiates the creation of a binder document (see Figure 3).

The Binding Process

Figure 3
Key deficiencies in the current binding process include:

- Significant delays between the confirmation of the bind order and the actual binder document received from carriers.
- Client dependence on the lead broker to relay the information to the carrier it’s placing the order with and receiving the binder document.
- Lead brokers’ dependence on local brokers to relay information to the non-admitted carriers they are placing with and receiving the binder document.
- Last-minute changes in the risk or participation percentage of one carrier, causing significant delays in the overall process.
- High operational efforts in getting the necessary data/documentation in one place required for producing a binder document.

A potential solution could be for all parties to collaborate so that the firm order and the binder document can be exchanged with minimal inter-party transactions.

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Settlement Process

After the binder documents/evidence of cover (EOC) is issued, the carriers initiate the process to collect the policy premium agreed to between the broker and client. The broker submits technical and financial information of the risk with the respective carrier for accuracy checks. Finally, subject to the carrier’s satisfaction on both technical and financial grounds, the brokers release the funds received from the client to the carrier.

Settling Up

Subject to acceptance of technical and financial information about the risk, the lead broker releases premium to the carriers.

Clarification on technical or financial risk information.

Clarification on technical or financial info from all carriers and chase for releasing the premium. Share any evidence of premium paid.

Technical and financial information on the risk and premium to be disbursed.

Seek risk-related info.

Seek risk-related info.

Technical and financial information on the risk and premium to be disbursed.

Technical and financial information on the risk and release premium.

Technical and financial information on the risk and release premium.

Technical and financial information on the risk and release premium.

Clarification on technical or financial information and evidence of premium received.

Clarification on technical or financial information about risk from non-admitted carriers and evidence of premium paid.

Clarification on technical or financial information and evidence of premium received.

Clarification on technical or financial information and evidence of premium received.
Key deficiencies in the current settlement process include:

- Frequent exchange between underwriters and brokers, and brokers and clients, to establish the technical and financial agreement, including numerous queries on various aspects of risk and financials. Information is exchanged via the lead broker, which can cause a bottleneck for rapid information movement.

- The carriers’ premium payment warranty date must be shared with the local brokers, which then share it with lead brokers and further with the client so that funds can be released on priority.

- Missing billing information and errors on technical submissions can take days to resolve.

- There is no view of outstanding claims pending when the premium is to be paid during renewals.

- The process is rife with monotonous manual tasks.

A potential solution is for all parties to collaborate so accurate technical and financial information can be shared in a timely manner.

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Claims Process

In the case of claims, clients inform the brokers of any loss-related information that can be used by an underwriter to settle the claim. Brokers then prepare a claim file, which is shared with all the carriers so that they can react to the claim.

How Claims Are Processed

Details like loss advise, loss report, adjustor’s report, lead agreement, year of contract amount payable, currency under payable, etc. are shared by lead broker with carrier and other brokers.

The admitted carrier may seek additional information for which the lead broker would coordinate with other brokers dealing with the lead carrier on the layer.

The non-admitted carrier may seek additional information for which the broker would have to coordinate with other brokers that are dealing with the lead carrier on the layer. Any interaction between carriers is via brokers.

Additional information from non-admitted carriers on claims and disburse claims amount.

Additional information required on claims and disburse claims amount.

Any interaction between carrier is via brokers.

Figure 5
Key deficiencies in the current claims process include:

- The same claims information is shared multiple times with all the carriers for an individual response.
- Brokers and carriers have no visibility into outstanding installment premiums.
- Urgent settlement date, if any, is communicated by the clients to the individual carriers via the brokers, which can delay the processing of the claim settlement.
- When the claim amount is less than a predetermined amount, a lead agreement clause (i.e., an acceptance of the claim by the lead carrier of the layer) is shared individually with every other carrier on the layer, which causes process delays.
- When claims span multiple layers such that both excess of loss and quota share is involved, it can be difficult for the brokers to coordinate between multiple carriers from multiple geographies operating through multiple brokers.
- New parties such as claims adjustors (acting on behalf of insurers) or arbitrators (in cases of disputes) may require further coordination with brokers and carriers, causing further delays.

A potential solution is for all parties to collaborate and share real-time claims information so that claims settlement processes could be expedited.

One problem that brokers face at each step of the broking process is information asymmetry, which is made worse when the number of participants increases. From a compliance point of view, the issue becomes further unmanageable due to the lack of data traceability. A possible solution to this problem is to involve all the parties in a deal via one common platform, which could reduce the information barrier.

A potential solution is for all parties to collaborate and share real-time claims information so that claims settlement processes could be expedited.
As noted above, the biggest challenge brokers face is asymmetry of deal information, which could be resolved by blockchain technology in conjunction with smart contracts.

To decongest the information haystack, organizations need a solution that streamlines information and leaves a clear audit trail that conveys which parties derived value from certain transactions. This will also reduce dependence on any one party in the process, and ensure that every party has some form of access to important transactional information. This solution must also be flexible enough to allow additional parties entering the framework to seamlessly blend into the ecosystem.

Our vision: a “virtual deal room” akin to a blockchain network, where participants involved in the facilitation of a deal can freely exchange information with each other during different stages of a placement, leading up to settlements and onto claims (see Figure 6).

Moving Blockchain from the Conceptual to the Tangible
While brokers, clients and regulators would be able to view all the information added as a part of the deal, carriers would have restricted privilege. They wouldn’t be able to see the details of other carriers that are in the same deal room but would be able to see the information that is provided for or by them.

The starting point of such a network would be at the pre-placement stage, with the lead brokers and client participating and exchanging information about the risk. The lead broker can share AML and KYC checks so they can eventually be used for the benefit (subject to commercials) of carriers and local brokers added to the blockchain network. As the journey continues into the negotiation phase, validated information related to quotes, layers and bind orders are shared with all network participants, which expedites the negotiation process, thereby reducing information asymmetry.

The settlement process would then be accelerated by the sharing of technical and financial information; to-and-fro queries are significantly reduced, benefiting all brokers and the carrier involved in the deal. Midterm adjustment information (if any) – for example, addition of risk codes of a new risk territory added under the policy – would further be available for everyone’s consumption on the network, giving carriers more time to react to such information and more quickly disseminate information such as an EOC to the client.

During claims, the flexible nature of the deal room would allow the addition of new parties in the network, such as loss adjustors, litigators, etc. Also, because claims-related information can be shared with everyone on the network, claim adjustors can react quickly and initiate the adjustment process. The regulator will be a part of the network at all times, with a ringside view of the action. This will help them monitor the risk at every stage and raise red flags if and when a breach happens - rather than when the deal closes.

And while blockchain technology will definitely aid in managing deals more efficiently for everyone on the network, it is worth noting that it will not impede in any way the traditional flavor of face-to-face negotiations that characterize broker/carrier transactions and interactions. This technology will aid the overall existing process of deal management for the client, brokers and carriers.

Each party within a deal will be accorded different privileges to view the information, which is determined based on their role type. While brokers, clients and regulators would be able to view all the information added as a part of the deal, carriers would have restricted privilege. They wouldn’t be able to see the details of other carriers that are in the same deal room but would be able to see the information that is provided for or by them. The only exception would be viewing the written percentage and the signed percentage of every other carrier within the same deal room under an encrypted name so that all parties are aware of how the risk on a layer is progressing (see Figure 7, next page).
A smart contract can form the basis of the deal and can be used to trigger automatic allocation of risk, premiums and, ultimately, claims. A smart contract would provide validations that trigger an automatic selection of the appropriate quotes for the placement when certain business rules are met during the negotiation phase.

While there are clear advantages of using blockchain (i.e., the creation of a clear audit trail of information and improved data access), it’s important to define how every participant on the deal will derive value at every step of the broking process via blockchain technology (see Figure 8, next page).
## Collective Benefits for All Parties on the Network

<table>
<thead>
<tr>
<th>Advantages of Blockchain on Process</th>
<th>BROKING ADVANTAGE</th>
<th>CARRIER ADVANTAGE</th>
<th>CLIENT ADVANTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risk information centrally available</td>
<td>Validated risk information can be referred to anytime during placement.</td>
<td>After reviewing the information, upselling opportunities can be identified.</td>
<td>Risk information published on the network decreases subsequent queries on the risk.</td>
</tr>
<tr>
<td>KYC/AML check is not repeated</td>
<td>KYC verification can be offered as a service to carriers.</td>
<td>There's no need to do a separate KYC check for the prospect, ensuring speedy creation of insured records.</td>
<td>The prospect doesn't need to share the same set of information and document with the broker and carrier separately.</td>
</tr>
<tr>
<td>Quote and layer information is centrally available</td>
<td>Quotes can be validated, with reduced need for coordination with real-time price and coverage governance.</td>
<td>It's possible to keep track of the risk progression and react more quickly, with more accurate quotes for gaps in layers.</td>
<td>A view of all carriers participating on the risk is enabled, as is the ability to track risk in real-time and review the best quotes selected by the broker with optimized pricing.</td>
</tr>
<tr>
<td>Firm order is centrally available</td>
<td>Time is saved because there's no need to individually notify carriers with the firm order.</td>
<td>The bind order can be instantly reviewed, and the binder document automatically generated.</td>
<td>The firm order can be instantly generated after the quotes are accepted so that the binder is received quickly.</td>
</tr>
<tr>
<td>Binder document is centrally available</td>
<td>There's less need to collate binders from every carrier on the network.</td>
<td>The premium collection process can be initiated more quickly, and upsell gaps identified.</td>
<td>In a few cases, getting an EOC on time expedites goods movement and gives the client more time to raise credit.</td>
</tr>
<tr>
<td>Expedite technical and premium settlement</td>
<td>There are fewer queries and minimal burden on the operations team.</td>
<td>Premium collection is faster because of minimal back and forth.</td>
<td>Policy documents will be made available more quickly.</td>
</tr>
<tr>
<td>Tacit renewal is more easily done</td>
<td>Risk administration is made easier.</td>
<td>Risk information can be reused to swiftly renew the policy.</td>
<td>No gaps exist in the coverage period.</td>
</tr>
<tr>
<td>Claims file is centrally available</td>
<td>Only validated claims information is shared by brokers, resulting in fewer queries related to claims.</td>
<td>There's more time to react to claims, with access to complete claims-related information.</td>
<td>Loss and surveyor reports can be easily made available to all parties.</td>
</tr>
<tr>
<td>Claims are easier to administer</td>
<td>There's no need to individually notify carriers with loss information, thus saving time.</td>
<td>Loss information on the network ensures that the settlement is expedited.</td>
<td>Faster disbursement of claims amount ensures business continuity.</td>
</tr>
</tbody>
</table>

**Benefits Across Broker, Carrier and Client**

*Figure 8*
Wholesale Insurance Broking Facilities Enabled via Distributed Ledger Technology

Facilities are among the fastest emerging alternatives of placing business mainly within the London insurance market. In simple terms, facilities are an arrangement between the broker and multiple insurers to write specific types of risks on meeting upfront outlined terms and conditions.

Facilities are intended to increase the efficiency and speed of the overall placement process for insurance by committing to underwrite the specified risks, which reduces the overall negotiation time and provides designed coverage as per facility arrangement. This process can be reimagined to be much faster with distributed ledger technology, through which interested stakeholders such as clients, carriers, brokers and regulators can exchange data with greater efficiency and low operational cost.

Consider a scenario in which risk is placed with a property facility with three carrier members. The client’s risk is up for renewal and is best fit to be placed with the property facility.

Here’s what would occur without DLT:

• The broker would validate the coverage and exposure of the risk through multiple e-mails and exchange of online/offline documents with the client.
• After evaluating facility eligibility for risk coverage, the broker would perform individual submissions to facility members through e-mail or bespoke portals by rekeying submission information multiple times.
• Negotiation for contract certainty would lead to multiple e-mail and document exchanges between the client, broker and facility members through multiple channels.
• The deal would be closed and information rekeyed or passed onto billing systems.
Here’s how it would look with DLT:

- The validated coverage and details of the exposure of the risk would be entered into a distributed ledger and made available to the client for review.
- After evaluating the facility eligibility for risk coverage, the broker would perform individual submissions to facility members through the interface on a distributed ledger. Validated risk information according to the previous step would be reused and exposed to the facility members with minimal rekeying effort.
- Negotiation for contract certainty would require updates in the information and be made available to all parties without the need to individually send separate communications.
- The deal would be closed and information relayed to the billing systems.

Streamlining Facilities’ Communications Via Blockchain

In a facility framework without DLT, each party communicates via different channels with the broker, leading to information asymmetry and inefficiencies. A facility framework with DLT will reduce information asymmetry and enhance the efficiency of the overall placement model by streamlining communication and readily making information available.
LEVERAGING THE CONCEPT; REALIZING THE BENEFITS

Blockchain technology is still in a nascent stage, with continuous iterations performed to identify opportunities and develop the technology further. Because of the unique position brokers enjoy with other parties such as clients and carriers, they can be at the fulcrum of this change and can drive the adoption of this technology more efficiently.

From an insurance broking point of view, we are at an inflection point where it is crucial to move fast to achieve a distinct lead. With this in mind, we propose that clients adopt a three-pronged approach (see Figure 10).

The success of a blockchain initiative will ultimately depend on how agile the organization is in thinking big, scaling quickly and adapting dynamically. The blueprint for a successful implementation in one area of the business can be leveraged to drive adoption in the organization's other business areas.

A Three-Pronged Approach

**ASSESS**

- Identify the business cases fit for adoption
  - Identify specific business cases to target for adoption.
  - Engage with blockchain advisors to develop technical and functional know-how.
  - Determine the potential business benefits and savings.
  - Gain business buy-in to initiate a transformative engagement with the right providers.
  - Analyze compliance and legal requirements.

**ENGAGE**

- Define and engage with appropriate partners
  - Develop use cases to elaborate on the identified business problems.
  - Engage with blockchain vendor to strategize the target architecture model.
  - Identify stakeholders like carriers, brokers, clients willing to participate on the network.
  - Develop proof of concept to demonstrate functionality.
  - Evaluate implementation models like in-house, partnership or off-the-shelf product.

**COLLABORATE AND DEVELOP**

- Finalize approach and implementation roadmap
  - Use the proof of concept to help the business visualize the approach and its benefits.
  - Verify technical and functional approach with all stakeholders.
  - Adjust approach and models based on feedback.
  - Baseline requirements and develop a performance standard.
  - Develop a roadmap for implementation.

Seek a partner that offers a mix of advisory, consulting and blockchain implementation services.

Work with a partner with ties to leading providers and frameworks that span the deployment process, from prototype to pilot to production.

Tap a partner with deep industry knowledge, dedicated offerings and extensive blockchain technical expertise, while offering an inclusive environment for building and implementing a dependable and value-yielding solution.
LOOKING AHEAD

The insurance broking business is old but has survived the test of time. From regulations to traditional business practices, much has changed over the years. What hasn’t changed is the fundamental nature of the business: aiding clients in their choice of the right risk management tool. Given ongoing business disruption, insurance brokers must change with the times and modify if not jettison traditional business models to keep pace with industry needs.

With cyber risks and political upheaval, new types of challenges are emerging, which will certainly test carrier resiliency over time. Similarly, alternate risk transfer techniques, such as catastrophic bonds and reinsurance sidecars, have emerged as a substitute to traditional vehicles of risk transfer.

Blockchain technology promises to solve many operational challenges that brokers face on wholesale broking deals; however, it is also important for brokers to understand the challenges that implementing such a platform will bring with it.

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Issues relating to cost, systems integration (synching legacy systems with new distributed ledger environments), regulations and trust will need to be addressed proactively with a solid mitigation plan. This is particularly important as the implementation of distributed ledger technology requires tight collaboration with entities outside the organization’s four walls. A successful strategy requires efforts that pivot around ecosystem synchronicity.

It is also important for other ecosystem participants, such as carriers and clients, to realize the potential benefits that blockchain technology can have on their day-to-day work so that it’s a win-win scenario for everyone. We believe the effort involved in overcoming these challenges are well worth the benefits.

Since the technology remains in a nascent stage, it will be crucial to gain the first-mover’s advantage, as doing so will enable brokers to seize the high ground in removing adoption impediments. When properly scoped and deployed, blockchain adoption will help brokers benefit not only from reduced operational costs but also from the ability to focus on things that really matter.
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