White Paper

Differentiating in Changing Insurance Markets:

Leveraging the Potential of Business Rule Management Systems

An IBM Company

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Introduction

This white paper has been commissioned by ILOG Ltd., an IBM company, and produced in conjunction with Douglas Shillito, who is FCII, a chartered insurance practitioner, managing director of Shillito Market Intelligence Ltd. and editor of Insurance Newslink (**www.insurancenewslink.com**).

This paper reviews the insurance market and examines the current relationship between business and information technology (IT), with references to research published in Insurance Newslink and elsewhere.

From this foundation, a view is taken about the present impact of the business rule management system (BRMS) globally, with indications on benefits achieved.

The Market Environment

It has been many decades since the world last faced a future with as many unknowns as the present – given the move into deep recession resulting from the global credit crisis. On a positive note, the insurance industry is not suffering in the same way as the banking sector. Industry commentators observe that there are pockets of optimism, mainly in the commercial, property and casualty insurance and re-insurance sectors. There is no doubt that personal lines will be as competitive as ever. Life companies will be concerned about capital levels and strive to ensure that they retain long-term investments until stock markets improve – all the while impressing on their customers the need to save.

Thus far, the significant fallout has centred on insurers such as AIG – companies that have spread their wings far wider than the traditional remits of the insurance industry – and those that are part of a wider financial group, such as Fortis. Interestingly, neither AIG nor Fortis has closed for insurance business, although both organisations will change radically in the coming months and years.

Perhaps one of the most important aspects of the credit crisis is its globalism, highlighting the fact that regulators will have to collaborate far more closely and develop a wider brief. Enhanced communications and the significant advances in IT have brought about a 24x7 electronic world that will greatly impact the insurance markets. In the United States, the market is state-regulated, but a federal option is now being seriously considered with new collateral arrangements for foreign insurers tabled. In Europe, Solvency II will be a major step forward if an agreement can be reached around the sensitive issue of group supervision.

Overall, the credit crisis means greater regulation and more cross-border collaboration – not only across countries but also across continents. Market consolidation and job losses are inevitable in some sectors. Several of the international insurers are bullish on the acquisition front in developed markets whilst many already have a presence in the emerging Brazil, Russia, India and China (BRIC) block. Russia has significant problems whilst Brazil is beginning to open its markets to foreign re-insurers. Despite the fact that growth in China and India is expected to slow, it will still be significant compared with that experienced by western economies.

Leaving aside the future for investment income, an insurer's chief executive officer (CEO) has major opportunities to differentiate or – alternatively – face the threat of takeover. Come what may, it is certainly not a time to sit back and do nothing – inertia is not an option.

The CEO Action List

The credit crisis has made the headlines over an extended period because it affects every business and individual, and because the ultimate remedy, outcome and duration are unknown. Meanwhile, the channel dynamics of the insurance markets are changing with the complete acceptance of the Internet as a viable delivery medium on a personal and business basis around the world. This impacts the customers' mindset as they experience instant service when ordering goods or enjoy burgeoning social networking and increasingly sophisticated search facilities.

The advent of service-oriented architecture (SOA) and web services, albeit unseen by the consumer, is transforming the way people access, update and share information. This revolution is taking the insurance markets by surprise as they battle to link myriad back-office, siloed legacy systems to a front office and beyond to the 'outer office' – the extended enterprise of policyholders, intermediaries, business partners, outsourcers, suppliers and sales personnel – all of whom are 'customers.'

Improving Agility

The biggest challenges facing the insurer are the profitable growth of multi-channel distribution, understanding and improving the 'customer' experience, and balancing the service vs. cost equation. It should be noted here that 'service' will increasingly become 'self service.'

Few insurers have gone for the Big Bang replacement of legacy systems because of the expense and time associated with such an approach. This defines their need for prioritised component developments that provide swift time to value and measurable return on investment (ROI) in terms of cost, productivity and service.

There is much to be done to improve agility, whether it be quicker product launch, rate change, straight-through processing (STP) or combating the rise in fraudulent claims that are already manifesting themselves as a by-product of the economic environment.

According to the Association of British Insurers (ABI), fraudulent motor fraud claims cost the industry over £5 million per week in the United Kingdom – and rising. At the end of 2008, the ABI reported that insurers were uncovering a growing number of cases of 'front-end fraud' where the customer had lied or failed to disclose material information to obtain cheaper insurance. Banks are also experiencing significant growth in this type of fraud, also known as 1st-party fraud.

A Positive Approach to Compliance

Effective C-level management will also be aware that keeping ahead of the market, from a compliance perspective, can evolve into profit from the cost incurred in conforming to, and keeping abreast of, multiple regulatory mandates. This will be seen through the mitigation of reputational risk and the enhanced perception of the organisation as consumers review the financial probity of their insurer. The effects of the 'Treating Customers Fairly' initiative by the UK's Financial Services Authority (FSA) will begin to bite in 2009. It should be noted that in 2008, the FSA imposed the second highest ever amount of fines on insurers for compliance failure.

Enterprise risk management (ERM) is fast becoming a major IT-spend area for insurers. This will increasingly cover operational aspects such as customer relationship management, efficiency of IT systems and processing, and management and staff quality – all of which contribute to rating agency assessments. The challenge is not to see ERM solely as a compliance reporting function but as a means towards an enhanced ability to provide proactive strategic decision making, e.g. pricing, profitability, customer modelling and profiling.

Damian Shaw-Williams, author of Datamonitor's recent report 'From Compliance to Improved Business Performance through Operational Risk Management', said:

Against the backdrop of well-publicised instances of fraud, wider systematic risks and compliance changes post-crisis, it is certain that there will be more stringent reporting requirements. In addition, regulators will become more prescriptive with management involvement in monitoring ongoing operations, as opposed to solely periodic reporting. Financial institutions have been *spurred into appreciating the benefits arising from seeing Operational Risk Management as the framework by which all other risks can be managed.*

A global, web-based survey of 359 insurers, conducted by Towers Perrin to look at enterprise risk management potential, commented:

Operational risk management capability remains relatively weak. Only 7% of participants believe they have in place an adequate operational risk management capability and 37% said that significant work is required, which is in stark contrast to views expressed on insurance, credit and market risks (9%, 11% and 16%, respectively, requiring significant work). Operational risk also lags other risks in terms of setting risk limits and Economic Capital calculation methodology.

Every risk can be viewed as both a threat and an opportunity and organisations are increasingly recognising the importance of successfully managing their entire risk landscape, and not just those risks that are either familiar or easy to quantify. Market leaders of the future will be those companies that have developed a strong risk-based culture that is fully aligned and actively engaged in their risk analytics and business processes.

IT-spend budgets are unlikely to be seriously impacted by the recession in respect to compliance-related initiatives. It can be argued that distribution-related projects will also be less adversely impacted by the recession given that they allow the business to get closer to the 'customer' and enabling the 'customer' to get closer to the business.

The Distribution Challenge

The future distribution challenge is to meld people, processes and technology.

As the impact of IT moves from the back office – and a transaction-centric approach – to focus on the entire process across and beyond the enterprise, the industry has seen far greater involvement from business management and staff, as components of cost/profit centres, in decision making for upcoming IT spend. Business resources are far more involved in the specification, project teams and, increasingly, changes to systems with minimal involvement from IT specialists. Successful liaison between IT and business has always been important but is now absolutely critical to strategic success.

Equally, a clear understanding of a comprehensive distribution scenario is of great significance given the strong trend towards multi-channel strategy. The ability of insurers to enable self-service and delegate authority securely will be a key differentiator.

High UK Internet Penetration

In the United Kingdom, which has high Internet penetration particularly in personal lines, diversification of distribution is already a fact with the growing number of aggregators (Internet price comparison sites) challenging the *status quo* of the market. There has been a move by brokers to work more closely with aggregators, whereas some insurers are taking an independent stance, noticeably Aviva and Direct Line.

According to EMB, Actuarial and Business Consultants, quoting recent research:

The use of aggregators has risen sharply and they now account for around 40% of new sales of motor insurance in the UK. Direct sales via insurers' websites bring the total new sales on the Internet to an estimated 60%. Aggregators also have a small but increasing share of the household insurance market.

Although aggregators help the public find the lowest rates by enabling them to compare a wide range of premiums, the report warns that the savings made by customers using aggregators are *not necessarily paralleled by cost savings for insurers. In other words, pressure on profit margins will eventually drive prices up. In the meantime, insurers are struggling to come to terms with the new reality.*

Affinity channels are also growing in a highly competitive market. Recent studies indicate that many UK insurers are struggling to respond to the Internet-led revolution and need to improve websites, customer relation management and STP. They also need to understand far more about the customer experience. The use of complex event processing technologies to capture website activity is growing in importance as insurers learn that they can use the information that their systems generate to improve their customers' experience. Failure to capture and use this type business asset is endorsed by findings contained in a report published last year by Pitney Bowes, entitled 'The Dynamics of Defection.' This report compared churn rates for motor and household business across national markets. Amongst the salient statistics contained in the document, 25.4 percent of UK customers changed insurers in 2007, which represented an increase of 17.8 percent from two years previously. This compared with 12.6 percent in the United States and 19.4 percent as a European average. 35.9 percent of UK customers were considering changing insurers in 2008. The reasons for defection across all markets were cited as:

- Not being recognised as a valued customer (55 percent)
- Unhelpful staff (47 percent)
- Ineffective call centres (42 percent)

Increasing Demand for Self-Service in the UK Life Sector

In the UK Life sector, self-service is in high demand, and more streamlined business processes are expected. This is in addition to the ability to obtain answers to investment enquiries online together with the ability to obtain surrender value through the same medium.

The content provided by the FSA Retail Distribution Review will result in more channels with differing pricing and commission/fee structures, which will exacerbate the existing problem of commission/compensation mix across a wide range of long-term products. However, if marketed effectively by the industry, regulator and government, it should result in a less-complicated, more transparent range of advice for the customer. The ABI is making a major push and lobbying the government to encourage saving – the watchwords for the next three years are 'consumer confidence.'

However, a survey conducted by Global Reviews in late 2008 of consumers and Life company websites indicated that UK Life companies need to improve services provided through their websites. It found that:

- *68% of consumers said that they preferred using websites to research life insurance options. Only 11% preferred to visit a branch to speak to a person face to face and 5% preferred to speak to someone on the phone.*

- *Half of consumers (49%) said that they would like to apply for life insurance through the web, compared with 19% wanting to apply through a branch and 11% over the phone.*

- *However only 13% have bought life insurance online. 41% bought through an IFA, 16% through a branch, 16% over the phone, 9% through a provider website and 4% through an aggregator site.*

- *Despite 68% of people preferring to use the web to research life insurance, the research found that only 20% found browsing websites to be useful.*

This would explain why only 13% have bought life insurance online and proves that there is an opportunity for life insurance providers to improve their websites and convert more customers online.

The survey found that consumers are very clear about the service they expect online. 44% think it is extremely important that a life insurance website recommends coverage based on their individual needs even though FSA regulations make it difficult (not impossible) for insurers to do this. Only four of the websites offer a Life Cover calculator, to help consumers ascertain how cover they require.

Despite the importance of being able to compare the range of life insurance products available the Global Reviews' benchmark found that only three websites have dedicated content to help users compare cover types but even they did not score highly.

Opportunities in UK Commercial Lines

In the UK sector of retail commercial lines, the i-Market initiative has started to take off with more brokers but there is wider scope to utilise available technology solutions across the process chain. A survey of 470 UK brokers by MMA highlighted that 20 percent have no plans for a website and that 33 percent do not have one. Only 33 percent offer online trading.

In the London market, the Internet has not been widely adopted – as yet – but the imminent introduction of the Lloyd's Exchange Platform, combined with the specialist software houses and outsourcers offering web services and SOA solutions, will accelerate the Internet's penetration throughout the process chain. Other influencing factors are:

- The increasing spread of Lloyd's managing agents globally
- The opening up of Lloyd's to a wider range of distributors

The competitive battleground will extend across the entire process chain – with the Internet as the catalyst. The prize at stake is the ability to understand and respond to customers' changing perceptions and requirements, which, in turn, will determine whether the business comes to that insurer. One solution which has already made an impact globally and is destined to be at the centre of the distribution challenge is the BRMS.

The Application of BRMSs

Although BRMS solutions have been applied globally by the insurance market with remarkable results, they still remain one of the industry's closely guarded secrets. This may be explained by the fact that many insurers who have achieved differentiation through the deployment of BRMSs are reluctant to openly publicise the considerable benefits that have been realised. BRMSs also often form part of a wider process application as they typically have strong integration capabilities with BPM, within SOA and with web services, all of which feature within many incumbent systems.

The insurance process lends itself to the use of BRMSs, particularly where there is an opportunity to streamline a new business or a claims operation, and where secure, monitored and appropriate delegation of authority together with self-service can provide a competitive edge. Delegation of authority is key to international and domestic general business as the growth of the US-style managing general agent (MGA) spreads wider, particularly in the United Kingdom.

Speed to Market and Time to Value

A centralised BRMS repository allows a business to deploy consistent policies – related to underwriting, risk, claims management, etc. – across different geographies and business lines with the ability to respect local variations and requirements from a business and compliance perspective. The ability of business, or IT, to author, test, deploy and manage a rule, in the knowledge that appropriate security permissions and auditing capabilities are in place for each region or area in which a rule is deployed, begins to give an idea of the power that resides within a BRMS for business and IT alike. The fact that a BRMS allows rules to be deployed in a fraction of the time needed to make a change to a hard-coded application also provides a compelling reason for this technology to be adopted. Speed to market and agility are essential in today's increasingly competitive marketplace, whether it be the launch of a new channel or product, rate changes or modelling 'what-if' scenarios. The days when an insurer could take six months to bring a new product to market are long past – the ability to perform that task in two weeks is avalaible today, thanks to BRMSs.

In 2008, Enterprise Ireland, in conjunction with DataMonitor, conducted an extensive study into top business and IT needs. It states:

The leading area for IT investment in 2008, as rated by 25 insurance institutions across the UK, US and continental Europe, is product innovation and development. Insurers which need to differentiate themselves to avoid commoditisation are now actively seeking to enhance their brand by investing in product innovation and service delivery.

With product development high on the agenda, insurers are also demanding a reduction in product development life cycle to bring products to market more competitively. 55% of the insurers surveyed believe that they will achieve this by centralising product/business rules which can be accessed via Service Oriented Architecture systems.

Insurers globally have consistently reduced time to market by more than a 50 percent and subsequent system maintenance by at least 25 percent by deploying BRMS. It is generally believed that maintenance of existing systems represents between 60 percent and 70 percent of IT expenditure.

BRMS – Enabling Business Users

A key feature of BRMS is the ability to enable business resources – business analysts, actuaries, underwriters and claims managers – to contribute to the definition and development of business decisions – in essence allowing them to do what they do best and remove the inertia associated with IT-change requests. This capability is also available to IT resources, if required. Clearly, such capabilities are a long way removed from the constraints by which IT-dependent organisations are bound.

Improved Productivity

BRMS flexibility and scalability bring extended life to existing systems which most insurers are looking to replace on a phased basis. Applications to transform COBOL code into flexible business rules offer the ability to extend the life of legacy systems.

Significant STP achievements have been obtained – typically productivity gains in excess of 50 percent for new business – enabling many more proposals to be accepted automatically and others routed to appropriate underwriters for review. This is a big step from the early, sceptically received introduction of expert systems two decades ago.

Scalability is also important – a Chinese insurer has introduced a BRMS application handling the operations of over 2,000 underwriters.

Claims – The Insurers' Shop Window

The claims process is the insurer's shop window and has long been the poor relation when it comes to IT spend. However, BRMS is revolutionising claims management worldwide. The use of BRMS to facilitate STP has allowed some insurers to more than double their ratio of automatically assigned cases to over 80 percent and, as important, facilitated improved identification of fraudulent claims. Fraud detection is equally relevant at the underwriting stage and instant access to policy and customer experience on other databases presents an immediate green or red light.

- One major, global insurer has saved more than $30 million in its claims processing in the United States through the use of BRMS. Case assignments now take two seconds, compared with days, and rule changes require two days to effect, as opposed to five months prior to the implementation of BRMS technology. 90 percent of 2 million claims a month are now assigned – automatically.
- A US insurer has improved claims process productivity by 33 percent – achieving $7 million in savings in one state alone. The same insurer now pays 99 percent of its PIP claims within the prescribed timescale.
- A Korean insurer has enhanced its fraud detection capabilities through BRMS. It reduced the time to survey 10,000 claims from two weeks to one day with 800 'test' rules. Rules can now be changed in a day, compared with two weeks.
- An Argentine insurer has reduced claims costs and fraud by 30 percent.

Growing compliance demands are being met with the use of BRMS where an 'audit trail' is always a key requirement. The flexibility of BRMS allows integration with business intelligence and performance-management systems, which ensures effective response to the increased demands that business has for ever-more effective operational risk management.

Streamlining Life

The Life market is a potentially major user of BRMS at the point of sale. For instance, the forthcoming Retail Distribution Review in the United Kingdom will introduce varying degrees of guidance, sales and advice, where decision trees built within a BRMS will feature strongly. It will enable Life offices to comply with the FSA's TCF initiative. The downstream benefits will run to the mitigation reputational risk – evidenced in the United Kingdom following the Equitable Life debacle.

BRMS is being applied very successfully to simplify complex, existing systems such as commission administration and payment on long-term Life and pensions contracts. Insurers have myriad commission scales that may exist on contracts which have not sold successfully – but which still have to be maintained.

Problems often increase in the wake of a merger. Two large European insurers have achieved major rule simplification in the commission area by introducing BRMS because of its flexibility, scalability and re-usability. One party has reduced the number of rules in production from a staggering 1.8 million to just 800!

Spotlight on the Customer

Significantly, one of the potential growth areas for BRMS is in providing a more holistic view of the customer. Achieving a single view of the customer must be considered a weak area, at present, for many insurers. With the high level of churn in personal lines, BRMS not only enables the renewal process to be streamlined but serves to aid identification of those customers the insurer wants to retain but may have a propensity to change. Conversely, BRMS can serve to identify those whose renewal terms could be increased to encourage a move elsewhere to ensure adherence to a desired risk profile.

Customer characteristic analysis assists in defining cross-sell opportunities and revisiting 'not taken up' cases if market conditions change. BRMS provides the means to execute these strategies swiftly, effectively and cohesively, given its ability, *inter alia*, to trigger reminders, actions, events and change.

Conclusion

The present credit crisis has confirmed – if proof were required – that the inter-dependence of global markets commits every component to experience the effects – good or bad – of major market events in geographically distant parts of the world. Never has the Chaos Theory been more graphically demonstrated. Whilst the insurance industry may not be experiencing the same impacts as some other financial markets, the fact of a global marketplace and the Internet age will have a major impact on co-ordinated regulation, streamlining diverse channel processes, outsourcing and off-shoring options, and provide a real opportunity to get closer to the customer.

BRMS are already achieving major cost-saving and service benefits across the insurance life cycle for those insurers that are differentiating. They are exceptionally well placed to allow insurers to adhere to and manage the ever-changing compliance requirements with which the industry is beset and which will proliferate in a very short space of time. Adoption of BRMS technology also ensures that the industry is well placed to effectively manage multi-channel distribution strategies – domestically and globally.

The continuing challenge is to take advantage of changing markets and deploy those IT solutions that provide more agility: recognising the new mindset of the 'self-service customer' and the reality of the outer office. The bottom line is a satisfied, profitable customer base that can be retained, grown and expanded at the desired pace through swift entry into new channels and markets together with a consistent, risk-managed and flexible approach to underwriting and claims.

To quote from the recent Arthur D. Little survey, 'Sleeker by Design,' which analysed the wide range of Net Expense Ratios (NER) of European non-Life insurers:

As the focus shifts from counting the immediate fallout from the credit crisis to long-term financial sustainability, operating efficiency will be a key area for the insurance industry. Flat hierarchies, automated processes, decentralised decision-making, centralised support functions and full use of efficient channels such as bancassurance, phone and Internet are all factors that are crucial to reach a high level of operational efficiency. Balancing innovation with complexity reduction will further be crucial for the winners of tomorrow to increase revenues whilst keeping costs in check. Companies should aim to reach a NER well below 25 percent to stay competitive. This does not mean keeping costs down per se but wisely embracing revenue enhancing costs whilst shunning costs that bring little benefit to the consumer.

About ILOG, an IBM Company

ILOG was originally founded over 21 years ago with the objective of applying cutting-edge technologies to business problems. Out of this ethos, the ILOG JRules business rule management system (BRMS) was born, and it has sat as a world leader of this type of technology ever since. ILOG's BRMS has been referenced in the most positive of terms by Gartner, IDC and Forrester on many occasions. The ability of BRMS to provide business and IT value in the insurance industry is a major strength of the paradigm. ILOG can draw on significant successes across the entire life cycle of insurance policy management with many of the major providers worldwide. A wide selection of case studies and success stories resides on www.ilog.com.

At the beginning of 2009, IBM acquired ILOG to incorporate its business into the WebSphere Division. ILOG views this acquisition as a resounding endorsement of the quality and viability of the technologies that it has developed over time and, specifically, of the value that BRMS brings to business and IT within the context of business process management (BPM) and service-oriented architecture (SOA). The integration of ILOG into IBM provides the promise that the value of BRMS can be articulated to a broader audience in a greater number of countries.

For more information, please contact the author, Richard Collard, on +44 1344 661600.