Frontiers
in Finance

For decision-makers in financial services
December 2015

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A new era in bank governance: UK individual accountability rules put spotlight on international banks

Letter from the editors

A form of stability has emerged. But it has been bought at a high cost. The macroeconomic environment continues to depend on artificially low interest rates which destroy value for savers and depress investment. The regulatory machine continues to drive forward but without a clear vision of the unanticipated consequences. And financial services firms face significant disruptions to their business models, exacerbated by the impacts of technology and changing customer needs. However, major change brings major opportunities.

In these new circumstances, many industry leaders are attempting to articulate a core purpose and sustainable strategy for their organizations which can make the most of the emerging opportunities facing the industry. But developing viable strategy remains a challenge. So the articles in this edition of *Frontiers in Finance* explore the themes of change, regulation and strategic challenge. Jeremy Anderson's Chairman's message directly addresses the **twin forces of innovation and regulation which are reshaping the industry**.

As the regulatory focus has moved beyond the initial urgency to stem the causes of the crisis, it is penetrating into areas where technological developments are opening up new possibilities, such as in new banking payments systems: a secure, effective and convenient system for making real-time payments, across borders, is becoming increasingly more conceivable.

Insurers, too, are rising to the challenge of major change. Technology will overturn traditional business models, so that new models, new revenue streams and new opportunities will transform the industry. For example, with all kinds of insurable items — from motor vehicles to houses — connected to the Internet of Things, the massive new potential for monitoring and data collection will transform the underwriting process, facilitating a transition to more predictive and precautionary interventions. The more far-sighted senior insurance executives acknowledge the scale of impending change and recognize the vital need to transform their businesses.

These fundamental changes are not confined to multinational businesses nor to the developed world. The forces driving them are being felt equally in Asia, where they are being enthusiastically exploited by innovative new businesses and industry disruptors. Changes to the regulatory environment are having significant impacts on the Asian investment management industry, constraining some growth opportunities while opening up others. Pension funds in Canada and Australia are searching for improved operational performance to help them sustain lasting change. Bankers, insurers and investment managers are all coming to terms with new demands for automatic exchange of information.

The information technology and data revolution lies at the root of virtually all these issues, regulation and innovation alike. This magnifies the opportunities financial services businesses have to recreate competitive advantage in a world of shrinking margins and more demanding regulation. As Giles Williams argues, one of the most significant unanticipated consequences of the regulatory response to the financial crisis has been that it is now bearing on fundamental aspects of strategy, business models and corporate governance. Financial services companies need to think hard about what their core responsibilities are and how to discharge them; but in so doing, they can evolve into new, more dynamic and more profitable businesses.

The issues the industry faces present real and fundamental challenges. Turning them into an advantage will not be easy, but the potential is great. We hope that this issue of *Frontiers in Finance* casts some helpful light on them.

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Twin forces: innovation and regulation

By **Jeremy Anderson**
Chairman, Global Financial Services

Jeremy Anderson

We have devoted a great deal of effort in the years since the global financial crisis to trying to understand the fundamental changes impacting the financial services industry, and gauging how they might develop in the future. Probably the two most powerful influences have been the pace and scale of change in the regulatory environment, and the continuing revolution being wrought by information technology, data and the digital economy.

We have tended to look at these rather in isolation: each is having massive impacts on our business and tracking their development is a major challenge. However, in recent conversations with financial services leaders in India and Asia, I was struck by two conclusions. The first is simply that the pace of change and innovation in the industry is irrefutable and appears to be accelerating. The second is that the impacts of regulatory change and technological innovation are becoming linked in unforeseen and significant ways.

Innovation in data and technology

Much of my conversation with clients focuses on how financial services should evolve in this rapidly changing world. Customer behavior is changing. The influence of data and technology is increasingly prevalent and pervasive. Sectors of the financial services market are converging, and established players are facing new entrants and competitors from unexpected directions. This is leading to increased tension between the traditional, regulated financial services industry and newcomers moving into unregulated sectors.

For example, in India, the Reserve Bank has recently issued a number of licenses for new 'payments banks'. These are intended to promote financial inclusion by facilitating payments in the small business sector, in lower income households and among the migrant labor force. Among the successful bidders — who will be subject to less intensive regulation — are e-commerce companies such as Paytm, telecoms and mobile wallet suppliers such as Airtel and Vodafone M-Pesa. A number of established banks fear that these new players could eat into their traditional transaction processing business. Incumbents therefore face the challenges of transforming themselves to compete: developing new business models, raising their internal skill levels and in particular exploiting data and digital technology to extend their reach.

Across Asia, infrastructure constraints are driving financial services companies to greater innovation, more rapidly than banks in the developed world. For example, we are seeing greater use of biometrics as well as smarter ways of interacting with customers and delivering services to them; these can improve the customer experience and deliver additional levels of security. Elsewhere, the CEO of one large Indonesian bank recently showed me a new technology application for person-to-person financial transfers via mobile phone. This was associated with a clever app to encourage the recipient to open an account with the sending bank. Here technology is being allied with customers' social and personal networks to drive development of the customer base.

This burgeoning 'FinTech' sector is poised to revolutionize banking across Asia. In India, there are nearly 1 billion mobile phones, and the governor of the Reserve Bank has highlighted the potential of mobile banking as a delivery channel for financial services.[1] In September, Francis Maude, UK Minister of State for Trade and Investment, announced that Britain and India are to collaborate to create a 'FinTech bridge' between the two countries. And one Indonesian bank is about to open its own captive fund for investment in FinTech.

There is great potential in the combination of new technology and new data management capabilities. The life assurance sector has traditionally depended heavily on the agency model. But companies are now using technology directly not only to achieve quicker and more effective transactions, but also to meet the challenges of the new regulatory environment. For example, they are developing apps to give instant support to underwriting; these can demonstrate key product features to clients, and they can also capture all the data necessary to meet regulatory requirements for Know Your Customer, Anti-Money Laundering, etc. This is a win-win situation — the company can reduce regulatory risk and compliance costs and improve the quality of business and customer service at the same time.

New structures and relationships

As these innovations mature, the relationship between the regulated sector and the incoming disruptors is evolving. Previously, the impact of new entrants — Amazon, PayPal and the like — was principally to undermine and disintermediate those established providers with a large, well-established customer base. But now, more subtle and complex collaborative approaches appear to be emerging. Chief Information Officers, data professionals and marketing specialists are engaging directly with the new entrants to explore whether they can create mutually beneficial innovations to learn from each other and to embed new arrangements in their operating models. As we have seen in India, a number of established companies are reported to be considering alliances and joint ventures with technology-based disruptors.

Behind most of these developments is the data revolution. New structures and relationships are evolving to allow collaborative exploitation of data. Consumers tend to see the results of innovation only through their external manifestations: they see the principal consequences in terms of the instant availability of goods and services on a wide range of mobile devices. Behind the scenes, however, these developments rest on massive quantities of data. So acquiring data through techniques such as data mining, getting it right, getting it clean and then wringing value out of it effectively is absolutely essential, and will undoubtedly be the foundation of competitive edge in financial services in the future, both in front and in back-end processes.

> "The impacts of regulatory change and technological innovation are becoming linked in unforeseen and significant ways."

[1] 'Central bank chief Raghuram Rajan wins credit for reform of monetary policy', *Financial Times*, 12 October 2015.

Regulators driving innovation

Regulators are increasingly aware of the critical importance of data to financial services. Much regulation is now focused on the management of data or implies dependence on data to meet regulatory demands. Regulators are increasingly seeking to extract very large quantities of data from firms, so that they can undertake their own modeling and make better-informed assessments of risk. The massive expansion of the associated burden, and the proliferation of regimes to which multinational companies are subject, multiplies the burden on data even further. Increased stress testing, automatic exchange of information, requirements for customer information: all present a huge data management and reporting challenge. This is further magnified by the forthcoming IFRS9 accounting changes for banks and by IFRS4 for insurers: These will be hugely demanding of data capabilities.

The attitude among regulators seems to be changing. Now that the financial sector has been stabilized after the crisis — balance sheets have been strengthened, liquidity improved and so on — attention is turning to ensuring that institutions are not only financially sound today but are well-run and well-governed to ensure robustness for the future. Regulation is therefore pushing at the extremes of business models. At one extreme, it is forcing ever-greater granularity in terms of compliance, data protection, fraud prevention and the like. At the other, it is becoming a key theme in issues of governance and accountability.

A good example is the new Senior Managers Regime in the UK (see page 34), which focuses on individuals who hold key roles and responsibilities in financial institutions. Companies will have to define and allocate responsibilities for people carrying out senior management functions. Individuals who fall within this regime will have to be approved by regulators, and companies will be legally required to implement procedures to ensure their fitness and propriety. This will increasingly drive organizational changes designed to ensure that the right people, with the right attitudes, are appointed to critical management roles, able to exercise leadership and to impose discipline.

This spotlight on accountability is now being reflected globally. Whether it is a matter of top management, middle management or the front line; or the end-to-end process chain from back- to middle- to front-office — not forgetting outsourced services — the intention is that there will be no 'black holes' of accountability.

In response to these pressures, banks are having to rethink not only their business models but their core purpose and fundamental structure. A key issue which large multinational companies need to work through is the interaction between strong group governance and local oversight and accountability of legal entities. In practice, this is not a major constraint on how global banks are governed and managed in normal times. But it is an absolutely critical issue in the event of failure: as Sir Mervyn King, governor of the Bank of England, pointed out, banks live globally but die locally.

In many ways, we are seeing a reversion from the high-water mark of financial services globalization to more localized models: with holding companies and separate operating companies. Banks are clearly pulling back from their global footprints, reducing their global reach. What is interesting is that regulators are now encouraging banks to invest in innovation to meet these challenges, and to satisfy their demands for data and information, while retaining their focus on financial security and stability; one Southeast Asian regulator has set up its own internal unit, pulling together a specialist team to support financial innovation and the more effective use of data and analytics.

So while incumbents and new entrants are converging around data and technology, regulators are getting to promote safe innovation as a contribution to maintaining global financial stability, customer convenience and financial inclusion.

Innovation is no longer just the domain of upstarts and market disrupters. The pace and extent of change has in fact caused innovation to extend into the field of regulation and regulatory compliance. The question the industry faces is what will be the unforeseen consequence of innovative approaches to the application of regulation on financial services. ■

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Building a strong insurance risk culture

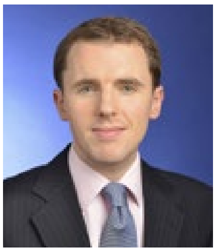
By **Rob Curtis**, KPMG in Australia
By **Andrea McNeill**, KPMG in the UK
By **Anthony Widdop**, KPMG in the UK

Highlights

- Organizations with mature risk cultures are more likely to make decisions that satisfy long-term business goals and meet regulatory demands.
- Although a risk culture starts at the top, with strong messages and consistent behavior from leaders, all employees should see themselves as risk managers and consider the risks in their everyday decision-making.
- Incentives and performance management have a big part to play in rewarding appropriate risk behavior; there should be zero tolerance for inappropriate risk-taking.

Rob Curtis

Andrea McNeill



Anthony Widdop

More than 7 years after the onset of the global crisis, the financial sector continues to attract unwanted headlines, with the spotlight shifting somewhat from banks to insurers. Consequently, regulators are taking a heightened interest in organizations' risk management and underlying cultures. In 2014, the International Association of Insurance Supervisors (IAIS) called for insurers to demonstrate "the ability to promote a sound risk and compliance culture across the group."[1]

The Financial Stability Board (FSB), an international body that monitors and makes recommendations about the global financial system, has also issued guidance on risk culture stating that: "supervisors should satisfy themselves that risk cultures are based on sound, articulated values and are carefully managed by the leadership of the financial institution," and furthermore that: "institutions with a strong culture of risk management and ethical business practices are less likely to experience damaging risk events and are better placed to deal with those events that do occur."[2]

[1] *Issues Paper: Approaches to Group Corporate Governance; Impact on Control Functions*, International Association of Insurance Supervisors, October 2014.
[2] *Guidance on Supervisory Interaction with Financial Institutions on Risk Culture: A Framework for Assessing Risk Culture*, Financial Stability Board, April 2014.

> Traditionally, 'risk' within insurance is seen as solely the domain of the actuary. This is no longer the case.

In a strong risk culture…

– the board and executive management drive risk culture

– every employee understands and embraces the organization's risk appetite and risk management framework

– threats or concerns are identified and escalated swiftly, with employees comfortable (and encouraged) to raise issues

– individuals are clear about the risks inherent in their strategic and day-to-day decisions

– every employee continuously learns from the experiences of others

– personal and organizational interests are aligned, via appropriate performance metrics, linked to remuneration risk behavior is monitored regularly, with swift corrective actions taken over any breaches; staff are encouraged to consult with their superior when they are uncertain whether a particular action is outside the organization's risk tolerance.

Why risk culture matters

Risk culture can be described as the way in which decision-makers at all levels within an insurer consider and take risks. When risk appetite is fully agreed and understood, all employees are conscious of risk in their everyday decision-making, appreciate the trade-offs between risk and reward, and consider the interests of the wider organization above their individual objectives.

However, defining risk culture, and establishing a sound risk management framework, is a considerable challenge. Traditionally, 'risk' within insurance is seen as solely the domain of the actuary, and employees in customer-facing or product design positions may have never even acknowledged that there is a risk management element to their work. Consequently, many organizations fail to prevent excessive or inappropriate risk-taking, which can, in some cases, cause significant losses, penalties and negative publicity. One example is the recent UK payment protection scandal, where insurance companies and bancassurers are having to pay billions in compensation for mis-selling of policies.

In organizations with weak or undeveloped risk cultures, responsibility for risk management is unclear, with lack of board oversight and direction, low awareness of risks amongst employees, and deficiencies in risk monitoring, reporting and controls. The risk management function itself is typically under-resourced and under-qualified, while key individuals such as the Chief Risk Officer (CRO), the Chief Financial Officer (CFO) and the approved actuary often have multiple risk decision-making roles that create an excessive workload.

Perhaps more importantly, individuals are not measured or incentivized on risk performance, and there is an over-tolerant attitude to breaches or mistakes, with those taking excessive or inappropriate risks rarely disciplined, implying that such behavior is acceptable.

Within a branch network or telephone service center, staff may be under considerable pressure to meet targets, which can lead to sales of products that are not always a) in the customers' best interests and b) in line with strategic goals. Incentive schemes are partly to blame, by rewarding salespeople primarily for goals set by their immediate managers, which may prioritize volume over quality. These can apply both to direct sales and those made through intermediaries.

Insurance companies' reputations are also at daily risk from poor service quality resulting from slow, inaccurate or unfair claims handling, or marketing messages that over-promise benefits (such as speed of replacement for stolen or damaged goods, or availability of hire cars to replace damaged vehicles). A poorly designed online sales process can easily cause customers to self-select the wrong products.

Compliance reporting, for regulations including Solvency II and International Financial Reporting Standards (IFRS), can also highlight weaknesses in risk management. Insurers may be unable to demonstrate that controls are in place, and being adhered to, and fail to produce accurate reporting that paints a true picture of the business.

Consequently, regulators are raising the bar by demanding more risk-sensitive capital regimes, as well as stress and scenario requirements. They are also, increasingly, requiring a clearly articulated risk appetite statement, better assessments of risk management frameworks and risk culture, and expecting senior executives to be rewarded directly for encouraging sensible risk-taking behavior that supports long-term corporate financial interests.

From awareness to action

Ultimately, culture is all about actions; not policies or documentation. With regulators showing an increasing interest in risk culture and behavior, how can companies take a barometer of their current capabilities, in order to make relevant improvements?

There are three important questions to address:

– Does the organization have appropriate structures and processes in place to define the desired culture?

– Are those structures and processes adequate to create the desired culture?

– Do structures and processes drive effective behaviors in practice?

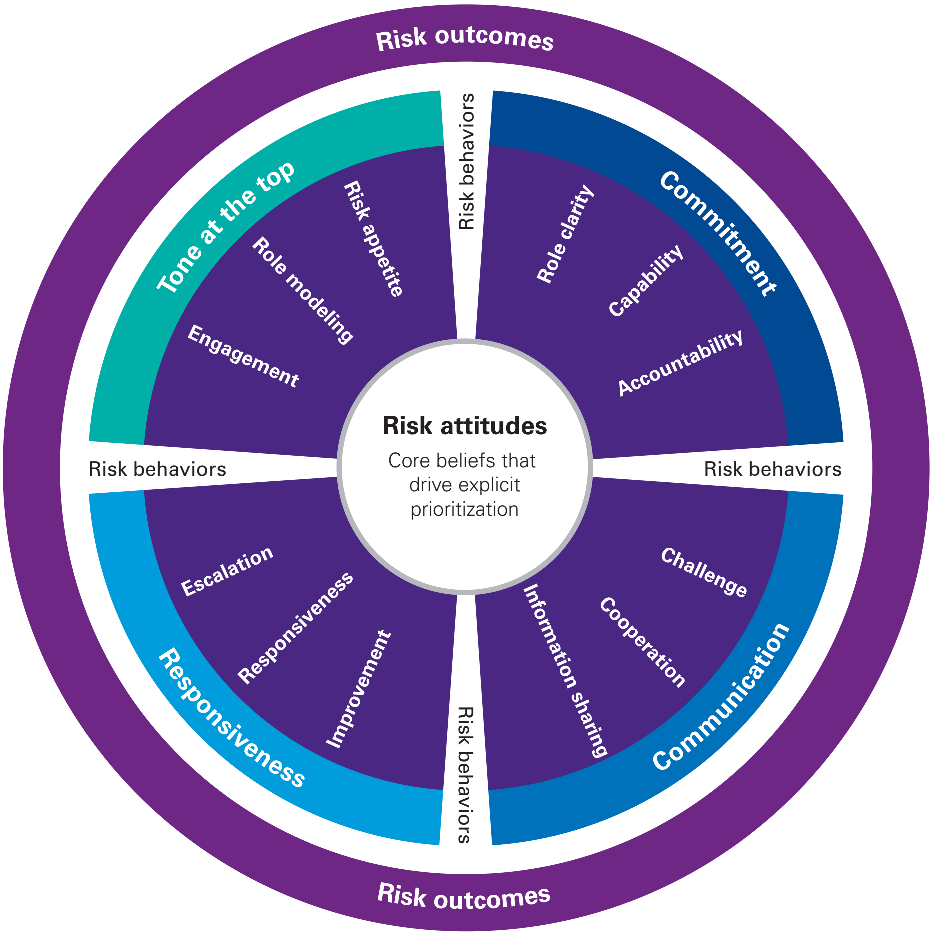
An in-depth evaluation involves close scrutiny of risk and compliance policies and past interactions with regulators, along with detailed observations of staff behavior at all levels. By seeking the views of a cross-section of employees and managers, leaders can better understand employees' attitudes to risk management, and how risk management policies, procedures and systems work in practice, highlighting any gaps.

Data analysis can reveal patterns of customer complaints, regulatory fines and requests for closer supervision and monitoring, across different departments and locations. Such incidents should be monitored constantly, and their root causes identified, to offer a continuous indicator of cultural performance. This is a sizeable investment requiring strong endorsement from leaders.

Insurance companies with strong risk cultures are likely to exhibit four key characteristics:

1. **Tone at the top**
The board and executive management should drive risk culture, with leaders exhibiting total consistency in words and actions, taking a visible lead in risk management activities — and being fully accountable when risk parameters are breached. By making risk a formal standing agenda item at board and management forums, they can demonstrate its importance to all stakeholders. They must ensure that all employees are aware of the organization's approach to risk management, reward positive behavior and act decisively when inappropriate risks are taken, if necessary through disciplinary action. It is very helpful to keep in touch with front-line activity through regular visits to branches and contact centers.

Key risk attitudes



Source: KPMG International, 2015.

2. **Communication**
Although leaders set the tone, they can't be alone in delivering messages about the importance of risk. Senior managers of divisions and business units are also part of the communication process, which must filter down through the organization — and between departments — to the most junior people. In this way, everyone can understand the risk appetite and capacity at the individual, team, department and company level. In addition to recording sales calls, staff should engage in focus groups, surveys and one-on-one interviews, to ensure they are continually aware of the risk culture and are conforming to procedures.

Rather than acting as static recipients of advice, all employees should be encouraged to actively share information and feel safe to challenge unacceptable behavior and escalate issues. This calls for clear channels for 'whistle-blowing', implying that it is acceptable to criticize the business's activities without fear of retribution.

Creating an effective transformation program

The program should aim to build a culture aligned with strategy, values and risk appetite. It needs to detail actions to address any gaps in current risk management practices; actions that are specific, owned by an accountable executive, subject to time limits and have relevant success indicators. Regular reviews can keep the program on track and evaluate progress against milestones.

Questions for insurers

- Is the board able to articulate the kind of risk culture it wants, and can it explain this clearly to all employees?
- Does the board have a road map towards a strong risk culture, and can it demonstrate steps it is taking in this direction?
- Are risks being identified, measured, managed and controlled in a manner consistent with the organization's risk appetite?
- Do all staff understand and adhere to the organization's risk appetite, as it relates to their particular roles?
- Do employee incentives promote long-term financial sustainability?
- Do all employees at all levels have the skills to manage risk effectively?

3. **Responsiveness**

In a risk-aware culture, issues are escalated and dealt with swiftly and decisively, before they can become major problems, with a central point of contact for all employees for the management and treatment of risks. And, crucially, any learning from such incidents is assessed and built into future policies and behavior, to avoid a reoccurrence. If something slips through the cracks, management should analyze why staff did not comply with protocols, and re-educate people on the importance of such checks and balances, as well as stressing the need to act within the 'spirit' of risk management.

4. **Commitment**

Risk must become second nature to all, and not something that applies only to actuaries and/or a central risk team. High profile cultural transformation programs often fail to achieve lasting change, because they don't focus sufficiently upon individuals, nor explain how people should behave to be more risk-aware. To make cultural change happen, leaders must understand the day-to-day dilemmas faced by staff — such as management pressure on sales numbers — and address these issues directly. Performance management and related compensation systems are key to gaining commitment and should balance local branch/office sales targets with wider organizational goals, as well as rewarding good risk management behavior, which will deter staff from taking unnecessary risks in pursuit of short-term profit. Whether selling in person, by phone or online, direct or through intermediaries, the same principles of fairness and appropriateness must apply.

The approval process for new marketing initiatives has to be robust, to ensure that the business has the capability to meet any promises. Risk management also requires new skills, in order to identify, assess and mitigate risks, which calls for tailored training and coaching.

Good for compliance, good for the business

As well as increasing the chances of remaining compliant, a strong risk culture gives the board and shareholders greater confidence in an insurer's integrity and in its ability to meet customer expectations. Comparison websites may have made the sector more price-driven, but customers still appreciate doing business with companies that are seen to be acting in their interests, through offering relevant products, attentive customer service and a swift, fair claims process.

Having invested in risk processes and frameworks, insurance companies must also devote resources to building a risk culture, to bringing frameworks to life and to ensure adherence to policies. Once this has been achieved, all employees — not just actuaries — will be able to say that they are risk managers. ■

Parts of this article were taken from a chapter, *The rising importance of risk culture, in the KPMG publication: Evolving Insurance Regulation, The journey begins, Part 1*, May 2015.

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The impact of regulatory reform in banking continues to shape the sector

By **Giles Williams**, KPMG in the UK

In the immediate aftermath of the banking crisis, there was a political imperative to solve all of the industry's ills quickly. Inevitably, in their haste, regulators didn't have the time to review the long-term impacts of the urgent actions taken to stem the causes of the crisis. Now that we have moved past the point of immediate crisis, the 'new normal' in the banking environment has emerged. Now, banks and regulators are finally able to look more dispassionately at the ramifications of the original emergency measures.

Giles Williams

Now is the appropriate time to address the less-obvious and sometimes unintended consequences the industry faces.

Banking organizations face a unique set of post-crisis challenges:

1. Lagging recognition of regulatory impacts, both intended and unintended.
2. Far-reaching and unintended consequences impacting many business areas.

The answer is for the politicians, regulators and banks to take a holistic view of what we are seeking to manage with the regulatory agenda today. There is a recognition that the performance of the wider economy and the role of financial services within this is important.

Lagging recognition of regulatory impacts, both intended and unintended

When regulations were implemented, the general expectation was that there would be a few new rules and some changes to existing ones. Banks soon realized that the new rules have, in fact, affected the operating models of their core business, notably extending credit, making payments, selling savings and risk management products, or other protection products. Banks are finding that in the new regulatory era, the impact of these rule changes are more fundamental than first anticipated and that they must change to thrive in the new environment. Most banks, however, really didn't 'get it' until recently, and while boards and chief executives are now engaged, lower levels within banking organizations have been somewhat slow to come around. Equally, the politicians are now realizing that the endless focus on financial stability has had an impact on the wider economy and all stakeholders recognize that adjustment is required.

While banks are trying to address many of these specific regulatory issues, there is concern about how these all affect the 'big picture' of the banking industry. Regulatory effects are not being dealt with cohesively by banks or firm management. Many organizations fail to take a holistic view in terms of recognizing regulatory policies and other touchpoints. By 'siloing' their focus, they end up hurting their own efficiency.

While some finger-pointing towards former regulators should be expected, it should be noted that the previous administration, whether in Brussels or other capitals, was operating under emergency circumstances during the banking crisis. The difference now is that the immediacy has subsided, allowing more time during the current, more stable period to recalibrate and re-focus regulatory compliance efforts.

To be sure, there are gaps between business planning and alignment with the broader corporate point of view. Regulatory intervention on access to data, for example, raises many questions at the planning level about how data and technology resources for banks should be equipping senior management to operate effectively, innovate and be flexible enough to anticipate the evolving demands of regulators. The goal is for banks to achieve alignment on business planning and regulatory reporting in as many ways as possible.

Far-reaching consequences impact many business areas

All of these issues have significant impact on the legal structure, business model, strategy, and use of new ideas to drive down cost (mainly through technology). The difficulty lies in trying to balance the interests of each stakeholder group, which thinks it is the most vital in protecting the balance sheet, the economy, or more likely, its own interests.

Regulations have created a virtual cascade effect that impacts strategy, and the business and operating models. Recognizing this issue as part of strategic planning allows banks to identify and potentially mitigate some of the looming adverse consequences. Additionally, it allows banks to manage investor, regulatory and supervisor relationships, such that they can better understand and address current and future regulatory realities.

Looking ahead, banking faces a significant change and challenge to the status quo, which are not necessarily bad things. On the horizon looms great promise from technologies that can critically address the competing challenges of transparency and accountability in the new regulatory era. This positive outlook could very well hinge on advances in big data, analytics and financial technology. Additionally, new data architecture must become part of the conversation about the future of banks, particularly in a regulatory context.

But many questions remain. Notably, is there sufficient flexibility today to anticipate future regulatory changes around reporting, privacy and the demand of digital marketing? And will these help create fundamentally better customer experiences? A continued focus on factors that drive and inspire regulatory change will help banks plan effectively for the future, and active consideration should be given to aligning compliance and regulatory planning with strategic business development and customer-centered business transformation.

From a governance perspective, banks feel the pressure of new regulations.

Banks must address the interests of their wider stakeholders, which include:

1. Customers
2. Shareholders
3. Providers of debt finance
4. Day-to-day supervisors
5. Regulatory policy-makers
6. Politicians

This in turn drives up the cost of doing business, constrains balance sheet composition, and affects business activities, legal and operational structures, and business models and strategies.

Data requirements are creating both burden and opportunity and those banks that can strategically reexamine current regulations for indicators of next-generation directives will succeed. Forecasting where regulations are headed can help banks strategically structure their data from existing systems to address current and future regulatory requirements.

Unintended consequences

Several less-than-obvious consequences (and unintended consequences) are emerging. The hope is to ensure that unintended consequences can be eliminated (without undoing the intended consequences, of course). The big question for banks today revolves around risk aversion, which is ironic for an industry that is effectively based on taking risks. In the new post-crisis world of personal accountability, some managers are not prepared to take pre-crisis level risks, which leads to decreases in the volume of extendable credit in absolute terms and in banks' willingness to extend credit to higher-risk borrowers. Requirements to hold even more capital than before are partially to blame. The net effect is a stifling of innovation and entrepreneurship. There are practical examples of this influence where banking institutions are generally reluctant to take deposits from corporate depositors because:

1. Deposits often arrive one day and are recycled the next day, preventing bank investment in anything other than government stock or treasury bills on which there is little economic return.

2. Corporate deposits boost the liability side of the balance sheet — i.e. it increases leverage, which is likely to attract additional capital charges.

The interplay of leverage and the liquidity coverage ratio were not factored into consideration, and through this cause-and-effect relationship, increased leverage has driven out the liquidity coverage ratio. Simply put: It was never an intended consequence that corporate treasuries would have nowhere to put their deposits.

This type of example is one that deserves an ongoing dialogue with policy-makers about how to mitigate the effects. The answer quite possibly could be to change the definition of leverage or to find other vehicles from which to make a profit, such as securitization (transforming illiquid assets into a security). To date, securitization in Europe has performed better than in the US, possibly due to vested sentiment, capital and data quality.

While regulators are generally effective at managing the traditional banking sector, the web of regulations has a side effect of creating an appetite in the marketplace for alternative and nontraditional lending avenues. As such, alternative provisions of credit, also known as 'shadow banks', are quickly moving into the regulatory radar. Regulators are trying to work out methods to monitor these lenders to determine if their reach — and risks — become systemic to the wider economy. If new risks do emerge, regulators will need to find the tools to identify them and find a proportional response through the existing regulatory regime or through new regulations.

A holistic approach is required to manage the regulatory agenda today

Organizations cannot manage compliance issues on a case-by-case basis; instead they must address the bigger picture for the good of their business and the economies at large. Banks should approach the regulatory agenda in a holistic manner to ensure compliance but also move forward with their own growth and development.

Business model effects

- Which countries will we operate in?
- Which products will we sell?
- How will we be profitable?
- How do we deliver sustainability?
- Are we going to deliver resilience?
- How do we demonstrate that we can deal with mega macroeconomic shocks?

Maintaining a comprehensive perspective might seem like an obvious approach, though many financial institutions fail to do so, leaving them out of touch with stakeholders and potentially behind the curve with regulators — a dangerous position to be sure.

While regulatory compliance is a responsibility, it also provides opportunities for banks to take a more comprehensive perspective. There are clear dividends to be gained from current regulatory realities: Banks can improve relationships with shareholders, regulators, customers and other key stakeholders. In the end, it is fundamentally important to not lose sight of the whole process while trying to keep key stakeholders happy.

In the Evolving Banking Regulation series, we examine these issues in greater detail, but it is clear that regulatory affairs must be centrally considered as an integrated factor for strategic planning overall and not a reactive component dealt with simply to address compliance concerns. The greater gain can be realized in aligning planned needs for regulatory reform with operational innovation and business transformation that can simultaneously help banks recognize structural changes that improve compliance while enhancing business performance. The future is bright, for the banks that can embrace these changes and who recognize more than just challenge in regulatory change but also the premise for business transformation and innovation in banking. ■

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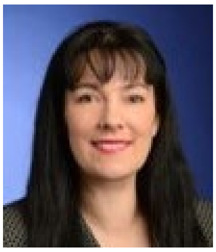
The challenges and complexities of AEOI implementation

By **Natalie Semmes,** Partner, KPMG in the UK
By **Jennifer Sponzilli,** Global AEOI Lead Partner, KPMG in the US



Natalie Semmes

Jennifer Sponzilli

There is universal recognition that income tax evasion starves governments of much-needed revenue and undermines the perceived fairness of tax systems. Evidence of tax evasion has spurred support for a common reporting standard to catch evaders no matter where they reside. The G20 asked the Organisation for Economic Co-operation and Development (OECD) to develop a model; the Common Reporting Standard (CRS) would be automatic and could be rolled out globally. Establishing a global regime to exchange account information facilitates tax transparency, which in turn will lead to greater compliance with the income tax laws across jurisdictions.

To that end, the CRS builds on the Model 1 Intergovernmental Agreement (IGA) under Foreign Account Tax Compliance Act (FATCA) to expand the Automatic Exchange of Information (AEOI) to include account information for all non-resident account holders rather than just Americans.

Overcoming the challenges of AEOI

The scope of AEOI implementation cannot be overstated. For financial institutions that have not yet started to plan for CRS implementation, we recommend that they undertake an assessment to understand how the CRS will impact them. And as the circumstances are different for each organization, assessing individual institutional needs is critical to determine the amount of effort necessary to become compliant with the CRS. Several issues can affect the tax administrations and financial institutions as they undertake this Herculean task that will be a draw on resources. Understanding and working together to solve issues can help smooth implementation and create long-term stability for compliance. Forward-looking institutions have also seized on the opportunity the preparation for CRS presents in enhancing business models, improving customer service, streamlining operations and informing product development.

In developing their assessment, financial institutions need to watch out for:

The immense scale — The CRS eclipses FATCA and the IGAs in its scale. Under CRS, the FATCA year-end account balance threshold of US$50,000 for collecting information from new individual account holders does not exist, nor does the CRS have exceptions for local banks and smaller institutions that were available in FATCA. Add to that the search for all non-resident account holders rather than just Americans, and you can begin to get the sense of the multiple in terms of effort and annual reporting that will need to happen under the CRS.

The costs of compliance — With the short implementation time frame, financial institutions face the need for a systemic solution. In the UK, KPMG estimates compliance will cost approximately US$125 million for global banks to effectively implement the systemic technology solutions and the complex and costly customer outreach required under the CRS. Implementation and maintenance could be made even more costly by the creation of a third wave of CRS effective dates starting in 2018 for some countries in Asia, as well as the uncertainty regarding how governments will be enforcing compliance and how quickly they will ask for additional information after reporting.

Lack of legal certainty — There is a natural tension between transparency and data privacy. The information collection, storage and reporting required under the CRS would, in several jurisdictions, run afoul of data privacy rules. Financial institutions in many of the CRS jurisdictions cannot move forward with implementing the CRS until those governments give them the legal authority to do so. Time is of the essence here, especially in CRS early adopter countries.

Governments and financial institutions should be working to enable:

A wider approach — Because people can have more than one tax residence, to only allow the collection of information from customers tax resident in a jurisdiction with which the domestic government exchanges would result in financial institutions having to remediate their entire customer population each time a new country or countries signed on to exchange with the domestic tax authority. Not only would the time and expense of this approach be prohibitive, but the quality of information with each successive remediation would suffer significantly. Governments and financial institutions should work together to ensure the wider approach to collecting all tax residencies from its customers at one time is possible. Ireland and the UK have adopted this approach; the hope is that other governments will be able to follow.

A smooth landing — Due to the scale and lack of legal certainty, financial institutions of all sectors and sizes are finding it close to impossible to embed automated solutions that they will need to sustainably provide quality information to their domestic tax authorities. As the penalties for noncompliance range from small financial fines to jail time, financial institutions are understandably worried that they cannot comply with the degree of accuracy that the rules require. It is critical that governments allow their tax authorities to abate penalties where reasonable efforts to comply have been undertaken, ideally for some transitional period that is clear to both financial institutions and tax authorities.

The new global standard helps:

- reduce tax evasion
- discover previously undetected tax evasion
- recover lost tax revenue
- increase transparency among tax administrators
- automate information exchanges between jurisdictions
- encourage taxpayers to report all relevant information.

Higher customer response rates — The initial burden falls on financial institutions to identify the non-resident customers. Collecting this information will be challenging as response rates are low, with some response rates in the 15 percent to 20 percent range. Governments are therefore considering, and in some cases enacting, penalties or fines for noncompliant customers. It is unclear how such customer penalties would be enforced, but one could see situations where the customer and the financial institution would be placed in an adversarial relationship regarding the information collection/accuracy failure.

The silver lining?

Instead of taking the view that AEOI is a cost without a benefit, some firms are taking advantage of the improved data quality and connection of account information to build analytics capabilities to deliver more targeted services and products to their clients. In some instances, they are combining this with their anti-money laundering (AML) data to reap returns far beyond what they are spending on AEOI. Some are using machine learning programs to drive down the burden of remediation. Still other financial institutions are reusing some of the hard work done for FATCA to meet other regulatory requirements, like country by country reporting. Like any large change program, AEOI should have management considering business model improvements that can be driven by or added onto the required implementation.

What should organizations be doing now?

For financial institutions in early adopter jurisdictions, a short-term tactical solution is required for onboarding from 1 January 2016 and to capture year-end information on their preexisting customers. Thereafter, they should take a measured approach to designing and implementing a systemic solution that can be flexible for future changes. In preparation, organizations should also be considering:

- What can we reuse from FATCA?
- How much greater is the scale of the CRS in our organization?
- What are the level of resources we will need to implement and maintain compliant processes, systems and controls? How do we organize them?
- What training is required for front-line staff working with customers who have questions? What customer communications should you develop and issue?
- Is your existing system architecture up to the task?
- How will you ensure accurate and timely reporting with a minimum of government requests for additional information?

Almost every function in a financial institution is impacted by the CRS: operations, compliance, internal audit, legal, sales and service, financial crime, tax and technology. Critical to running a CRS program and a smooth transition to business as usual is a well-thought-out communication plan that brings together business units, functions and geographies that would not usually be connected.

The rise of 'improvements'

Notwithstanding the current compliance challenges of implementing the CRS, governments are thinking about how they can get better quality information, both from the CRS and domestically, and increase their ability to match income to beneficial owners:

Domestic reporting: Some governments are thinking beyond AEOI to improve tax resident information. Brazil, for example, collects less information about its nationals than is required by CRS, so has passed laws to implement a new domestic reporting regime.

TIN validation/matching: Several governments are considering extending the CRS requirements to validate the format of taxpayer ID numbers, and possibly, eventually, to something akin to the US Taxpayer ID Number (TIN) matching which requires matching names with ID numbers on an IRS database.

Additional schema fields: The European Union (EU) is planning to introduce additional CRS reporting fields with information that will help them match the reporting to the beneficial owner. These could be adopted by other CRS countries as well.

Customer notification: Some governments are considering requiring financial institutions not only to notify customers that they may be or are being reported, but also to provide customers with a statement of what was reported, so they would be sure to include it when submitting their tax returns. It is possible that under certain countries' data privacy rules, those customer statements may need to be sent prior to filing to give customers the chance to correct any errors in their CRS classification.

Penalties on customers: A few governments are considering penalties on customers, not only for providing knowingly false information, but also for providing inaccurate or incomplete data. Spain, for example, recently enacted a penalty of US$400 on customers providing false, inaccurate or incomplete CRS information to a financial institution.

The CRS and all these possible 'improvements' will require some higher level of advanced data infrastructure, which is likely to be a challenge for all governments and financial institutions around the world.

Conclusion

For larger institutions, management should be prepared for a sustained effort to comply with these evolving rules as governments and financial institutions learn from implementation challenges over the years. For smaller firms, keeping up with the rules and understanding how they impact your business is key.

Compliance is anticipated to be complex and expensive, especially with the significant customer outreach efforts required and the expected customer annoyance that ensues. There are several technology tools in the market that can make compliance more effective and efficient, but they take time to deploy and integrate, so the time to start planning is now. ■

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Transforming the insurance sector: how machines will change the game for insurers

By **Gary Richardson**, KPMG in the UK

Gary Richardson

Will the next round of competition in the insurance sector be fought — and won — by machine learning? It would seem so, with a handful of your peers already starting to arm themselves with the skills, capabilities and technologies to start winning the early battles. Are you ready to compete in this new environment?

Insurance executives can be excused for having ignored the potential of machine learning until today. Truth be told, the idea almost seems like something out of a 1980s sci-fi movie: Computers learn from mankind's mistakes and adapt to become smarter, more efficient and more predictable than their human creators.

But this is no Isaac Asimov yarn; machine learning is a reality. And many organizations around the world are already taking full advantage of their machines to create new business models, reduce risk, dramatically improve efficiency and drive new competitive advantages. The big question is why insurers have been so slow to start collaborating with the machines.

Smart machines

Essentially, machine learning refers to a set of algorithms that use historical data to predict current or future outcomes. Most of us use machine learning processes every day. Spam filters, for example, use historical data to decide whether or not emails should be delivered or quarantined. Banks use machine learning algorithms to monitor for fraud or irregular activity on credit cards. Netflix uses machine learning to serve up recommendations to users based on their viewing history and recommendations.

In fact, organizations and academics have been working away at defining, designing and improving machine learning models and approaches for decades. The concept was originally floated back in the 1950s but — with no access to digitized historical data and few commercial applications immediately evident — much of the development of machine learning was largely left to academics and technology geeks. For decades, few business leaders gave the idea much thought.

Machine learning brings with it a whole new vocabulary. Terms such as feature engineering, dimensionality reduction, supervised and unsupervised learning to name a few. As with all new movements, the ability of an organization to bridge the two worlds of data science-led machine learning and business is where the value will be generated.

Driven by data

Much has changed. Today, machine learning has become a hot topic in many business sectors fueled, in large part, by the increasing availability of data and low cost scalable cloud computing. For the past decade or so, businesses and organizations have been feverishly digitizing their data and records — building up mountains of historical data on customers, transactions, products and channels. And now they are setting their minds towards putting it to good use.

The emergence of big data has also done much to propel machine learning up the business agenda. Indeed, the availability of masses of unstructured data — everything from weather readings through to social media posts — has not only provided new data for organizations to comb through, it has also allowed businesses to start asking different questions from different data sets in order to achieve differentiated insights.

The ongoing drive for operational efficiency and improved cost management has also catalyzed renewed interest in machine learning. Organizations of all types and stripes are looking for opportunities to be more productive, more innovative and more efficient than their competitors. Many now wonder whether machine learning can do for information-intensive industries what automation did for manual-intensive ones.

A new playing field

For the insurance sector, we see machine learning as a fundamental game-changer. The reality is that most insurance organizations today are focused on three main objectives: improving compliance, improving cost structures and improving competitiveness. It is not difficult to envision how machine learning will form (at least part of) the answer to all three.

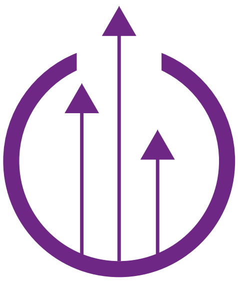
Improving compliance: Today's machine learning algorithms, techniques and technologies can be used on much more than just hard data like facts and figures. They can also be used to review, analyze and assess information in pictures, videos and voice conversations. Insurers could, for example, use machine

> "We recently worked with a global insurer to develop a proof of concept focused on improving the efficiency of claims processing. Using a decade's worth of historical data, we created an algorithm that was able to reduce claims processing times down from months to just minutes. And the machines weren't just faster, they were also found to be more accurate and reliable than the traditional human-led approach."
>
> – **Gary Richardson,** KPMG in the UK

Changing the game for insurers — machine learning is here

Reduce costs

Improve efficiency



Gain competitive advantage

learning algorithms to better monitor and understand interactions between customers and sales agents in order to improve their controls over the mis-selling of products.

Improving cost structures: With a significant portion of an insurer's cost structure devoted to human resources, any shift towards automation should deliver significant cost savings. Our experience working with insurers suggests that — by using machines instead of humans — insurers could cut their claims processing time down from a number of months to just a matter of minutes. What is more, machine learning is often more accurate than humans — meaning that insurers could also cut down the number of denials that result in appeals they may ultimately need to pay out.

Improving competitiveness: While reduced cost structures and improved efficiency can certainly lead to competitive advantage, there are many other ways that machine learning can give insurers the competitive edge. Many insurance customers, for example, may be willing to pay a premium for a product that guarantees frictionless claim payout without the hassle of having to make a call to the claims team. Others may find that they can enhance customer loyalty by simplifying re-enrollment processes and client onboarding processes to just a handful of questions.

Overcoming cultural differences

It is surprising, therefore, that insurers are only now recognizing the value of machine learning. The reality is that insurance organizations are founded on data and most have already successfully digitized their existing records. Insurance is also a rather resource-intensive business; legions of claims processors, adjustors and assessors are required to pore over the thousands — sometimes millions — of claims submitted in the course of a year. One would therefore expect the insurance sector to be leading the charge towards machine learning. But they are not.

One of the biggest reasons insurers have been slow to adopt machine learning clearly comes down to culture. Generally speaking, the insurance sector is not widely viewed as being 'early adopters' of new technologies and approaches, preferring instead to wait until technologies have become mature through adoption in other sectors. However, with everyone from governments through to bankers now making use of machine learning algorithms, this challenge is quickly falling away.

The risk-averse culture of most insurers also dampens the organization's willingness to experiment and — if necessary — fail in its quest to uncover new approaches. The challenge is that machine learning is all about experimentation and learning from failure; sometimes organizations need to test dozens of algorithms before they find the most suitable one for their purposes. Until such a time as 'controlled failure' is no longer seen as a career-limiting move, insurance organizations will continue to shy away from testing new approaches.

Insurance organizations also suffer from a cultural challenge common in information-intensive sectors: data hoarding. Indeed, until recently, common wisdom within the business world suggested that those that held the information also held the power. Today, many organizations are starting to realize that it is actually those that share the information that have the most power, not those that hoard it. As a result, many organizations are now keenly focused on

> “One of the great benefits of doing 'proof of concepts' is that it allows organizations to try — and fail — in a safe environment. This means they can take the time to find the right data, build the best algorithms and create the smartest use cases for their organization. This is not a plug-and-play technology — it takes work, patience and a supportive culture to succeed.”
>
> – **Gary Richardson,** KPMG in the UK

moving towards a 'data-driven' culture that rewards information sharing and collaboration and discourages hoarding.

Starting small and growing up

The first thing insurers should realize is that this is not an arms race. The winners will probably not be the organizations with the most data, nor will they likely be the ones that spent the most money on technology. Rather, they will be the ones that took a measured and scientific approach to building up their machine learning capabilities and capacities and — over time — found new ways to incorporate machine learning into ever-more aspects of their business.

Insurers may want to embrace the idea of starting small. Our experience and research suggest that — given the cultural and risk challenges facing the insurance sector — insurers will want to start by developing a 'proof of concept' model that can safely be tested and adapted in a risk-free environment. Not only will this allow the organization time to improve and test their algorithms, it will also help the data scientists to better understand exactly what data is required to generate the desired outcome.

More importantly, perhaps, starting with pilots and 'proof of concepts' will also provide management and staff with the time they need to get comfortable with the idea of sharing their work with machines. It will take executive-level support and sponsorship as well as keen focus on key change management requirements.

Take the next steps

Recognizing that machines excel at routine tasks and that algorithms learn over time, insurers will want to focus their early 'proof of concept' efforts on those processes or assessments that are widely understood and add low value. The more decisions the machine makes and the more data it analyzes, the more prepared it will be to take on increasingly complex tasks and decisions.

Only once the proof of concept has been thoroughly tested and potential applications are understood should business leaders start to think about developing the business case for industrialization (which, to succeed in the long-term, must include appropriate frameworks for the governance, monitoring and management of the system).

However, while this may — on the surface — seem like just another IT implementation plan, the reality is that machine learning should be championed not by IT but rather by the business itself. It is the business that must decide how and where machines will deliver the most value, and it is the business that owns the data and processes that machines will take over. Ultimately, the business must also be the one that champions machine learning.

All hail the machines!

At KPMG, we have worked with a number of insurers to develop their 'proof of concept' machine learning strategies over the past year. And we can say with absolute certainty that the battle of machines in the insurance sector has already started. The only other certainty is that those that remain on the sidelines will likely suffer the most as they stand by and watch their competitors find new ways to harness machines to drive increasing levels of efficiency and value.

The bottom line is that the machines have arrived. Insurance executives should be welcoming them with open arms. ■

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Connecting the dots: how the Internet of Things is creating vast opportunities for insurers

By **Justin Anderson**, CEO of Flexeye
By **Gary Richardson**, KPMG in the UK

Justin Anderson

Gary Richardson

One would be hard-pressed (and perhaps rather foolish) to deny the impact that the Internet of Things (IoT) will have on the world around us. From automated cars and home monitoring systems through to the management of infrastructure and the safety of underwater pipelines, IoT is already proving its ability to disrupt and transform virtually every aspect of our lives.

For the insurance sector, the adoption of IoT will be utterly transformative. Old business models will collapse as new models, revenue streams and opportunities burst into the market. And everything — from the way risk is assessed through to the way insurance products are sold — will be completely reinvented. Indeed, the real question for insurance executives isn't whether or not IoT will disrupt the sector, but rather, how they can best be preparing today for the advantages IoT will deliver tomorrow.

It's hard to ignore the hype around IoT. Some business gurus suggest it will have a bigger impact on society and business than the internet did in the 1990s. Most expect it to unleash a new and unprecedented era of productivity and value generation. The ability to enable contextual computing where the IoT sensors are able to create a richer data picture of the environment and will no doubt enable better decisions.

The numbers are certainly eye-popping. According to IDC Research, the IoT market will be valued at US$7.1 trillion within the next 5 years. In the same time period, the number of IoT devices added to the network will more than double. A report by McKinsey Consulting puts the impact of IoT across just nine specific use 'settings' at anywhere between US$4 trillion and US$11 trillion by 2025.

An even bigger punch

Yet it's not the size of the market that should interest insurers. Rather, it's the impact IoT will have on their existing business models that really matters. The reality is that — much like it has in the automotive, manufacturing, retail and logistics sectors (to name but a few) — the adoption of IoT will utterly transform the insurance sector.

Consider, for example, how the data from sensors in a car or in the home could enhance the way that insurers assess, price and manage customer risk. Or how IoT sensors on pipelines or railways could be used to predict failure coupled with smart systems to prevent damage. Or even how data from IoT devices could enable 'pay by use' insurance models. The possibilities seem limited only by the imagination.

Opportunities come with challenges

For some insurers, the adoption of IoT will be the ultimate game-changer, creating new competitive advantages, unanticipated sources of new revenue and innovative business models that can drive growth even while other, more traditional models and revenue streams erode.

Take, for example, a contents policy for a residential home. Smart use of IoT sensors and monitoring should reduce risk, thereby driving down policy premiums and reducing insurers' margins. But by adding actuators to the IoT device — say a control that automatically shuts off the mains if certain risk conditions are met — insurers could create new revenue streams by taking an active role in preventing risks rather than just protecting against them.

Taking advantage of new opportunities will not be easy at first. The shift from risk manager to risk preventer will come with challenges and big questions will need to be answered, such as: Who actually controls the 'actuator'? Who is responsible for the risk should the actuator controls fail? What levels of 'intervention' are customers willing to accept and in what situations?

Similar questions will undoubtedly arise in the auto insurance sector (who is responsible if safety controls fail?), the health insurance sector (who is protecting personal health data from wearable devices?) and the reinsurance sector (who carries the unknown risks?).

Need for innovative thinking

While there clearly remains much uncertainty about the specific uses and restrictions of IoT data and devices, what is certain is that insurers will need to start thinking much more strategically about IoT if they hope to survive and thrive in the future.

In part, this will require insurance executives to be more innovative about how they incorporate and adapt IoT into their existing business models to drive real and sustainable improvements. This means going beyond simply collecting data from IoT devices to instead thinking about how that data can be analyzed to deliver insights that improve performance or enhance operational controls and processes. Knowing that

About Flexeye

Flexeye is a multinational IoT service provider with offices in the US, UK and India.

Flexeye builds and deploys 'Smart Systems' that drive sustainable performance by analyzing connected data feeds.

The company was recognized as a 'Cool Vendor 2014' for IoT and was named the 'One to watch' in Asia Pacific by Gartner.

The IoT market will be valued at **US$7.1 trillion** within the next 5 years.

Source: IDC Research, 2014.

a certain risk is increasing is great; but being able to then turn that information into real-time protection services backed by an insurance product will be differentiating.

Similarly, insurance executives will need to think more creatively about how they might use their position and capabilities to create entirely new business models and sources of revenue. IoT could, for example, provide insurers with the right data to finally unlock the potential of usage-based insurance. Some are already using data from ground sensors to provide their clients with accurate weather and flood predictions as a 'value-added' service to help them manage their own risk.

Part of an ecosystem

Granted, the insurance sector isn't generally known for innovation. Yet the big challenge for insurers likely won't be the 'blue sky' thinking (many insurers already have teams scouting locations like Silicon Valley, Tel Aviv and London for new ideas), but rather, the need to work as part of a wider ecosystem in order to drive real value from IoT.

The simple fact is that IoT requires insurers to work with a wide variety of nontraditional partners including device manufacturers, analytics providers, telecom providers, software developers and even competitors. And this, too, will lead to a number of new challenges and considerations. Who, for example, owns the data — the device manufacturer who collects it, the telecom provider who transmits it, or the insurance company that stores and uses it? What standards and controls will be put in place to protect that data as it passes from one 'entity' to another within the ecosystem? And who ultimately owns the customer?

To complicate matters further, these ecosystems that insurers create around IoT will, themselves, need to be intertwined into other ecosystems. So while, at one level, an auto insurer will need to focus on building their own ecosystem to create a new solution, they will also need to ensure their work links into work being done by automotive IoT developers and manufacturers. And those, in turn, will need to be linked into the wider IoT ecosystem of developers, investors and regulators.

Talking a common language

Another area where insurers will need to collaborate in order to drive value from IoT is around standards. Much like any other emerging technology, IoT is still a virtual 'Wild West' of conflicting technology languages, controls and communications processes. But this, too, is rapidly changing.

Google's Nest, for example, has partnered with companies such as Samsung Electronics, ARM Holdings, Freescale Semiconductor and Silicon Labs to develop their 'Thread' networking protocol aimed at standardizing IoT communications in the home. At the same time, Intel has partnered with Cisco, AT&T, GE and IBM to create standards specifically for industrial IoT use.

> "The simple fact is that IoT requires insurers to work with a wide variety of nontraditional partners including device manufacturers, analytics providers, telecom providers, software developers and even competitors."

Source: www.flexeye.com

In the UK, the government is supporting the development of the HyperCat Consortium — a collaboration in which both Flexeye and KPMG are participating — to drive secure and interoperable IoT for industry.

This addresses two of the central challenges of the rapidly evolving IoT: firstly, how to find relevant and trustworthy data from connected 'things'; and, secondly, how to make it easier for those things to talk to each other. McKinsey estimate that interoperability is essential to unlock as much as 40 percent of the total value of the IoT, so it really matters to insurers and the businesses with whom they need to collaborate.

The HyperCat specs have already been agreed by 50 leading IoT companies and are intended to help users discover publicly available or shared data on an IoT server in order to build new applications and business models. In total, around 750 companies are backing the standard. Essentially, we are creating a platform on top of which new idea can grow.

Taking the next step

So what can insurers do today to prepare for the inevitable transformation that IoT will bring? We see three immediate actions that should be taken:

1. Assess your current product portfolio for products that are most likely to be enhanced by IoT and, conversely, most likely to be disrupted. This provides for a planning horizon for which products should start to be scaled back or divested and where the next wave of investment in product development should be directed.

2. Start to understand how your existing IT infrastructure and systems would react to the introduction of web scale data flows and how this impacts your current IT strategies, and start to make informed changes to ensure that you are well-placed to cope once an IoT-enabled product is launched.

3. Invest in IoT labs to experiment with the technology, integration patterns, partnerships and investment cases to take IoT-backed products to market.

It's an exciting time to be in the insurance industry. IoT presents a fantastic opportunity for an insurer to be truly innovative and disruptive. Turning the Internet of Things into the Internet of Insured Things.

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Investment management: a passport to growth in Asia Pacific

By **Julie Patterson**, Head of KPMG's Regulatory Centre of Excellence for Investment Management
By **Bonn Liu**, KPMG's regional Head of Investment Management for ASPAC

Julie Patterson

Bonn Liu

Commentators agree that Asia Pacific will be one of the main growth drivers of the investment management sector going forward. Yet few 'foreign' investment managers have managed to make much headway in this diverse and continuously changing region. However, recent developments in the region's regulatory landscape offer new promise for foreign players and local markets alike.

It is difficult to deny the draw of Asia Pacific for the investment management sector. Economic activity is on the rise (albeit at a slightly lower rate than before), securities markets are becoming more open, retail demand is high, and large institutional investors are wishing to invest outside the region and into different asset classes. New players to the market will need to consider who their long-term client will be. Clearly, all signs point to a period of great opportunity and growth for those investment managers active in the region.

Yet while the opportunity is certainly alluring, many foreign players have struggled to make good on their 'Asia strategy'. Some have been put off by the sheer complexity of the regulatory requirements. Those already active in the region are often finding it difficult to break into adjacent markets due to perceived regulatory barriers. Time spent researching the various markets to fully understand where best to domicile their Asia Pacific business will help investment managers new to the region.

If you look at Asia Pacific as a 'market', the reality is that the region is made up of more than two dozen independent countries, each with their own regulatory bodies, growth rates and level of economic openness. Simply put, the reason regulation is so complex for those looking at Asia Pacific as one market is that it is not one market.

Growing a regional investment management industry

There is good news in that — in most markets — new regulatory developments have largely improved the opportunity for foreign players looking to tap into (or grow in) the region. In China, for example, the introduction of the Qualified Foreign Institutional Investor quota system has improved foreign access to the market; the launch of the Shanghai-Hong Kong Stock Connect system has improved product development; and the start of the Mutual Recognition of Funds scheme has improved distribution.

> New regulatory developments have largely improved the opportunity for foreign players looking to tap into (or grow in) the region.

New market opportunities in China

Regulatory development	Benefit
Qualified Foreign Institutional Investor quota system	Improved foreign access
Shanghai-Hong Kong Stock Connect system	Enhanced product development
Mutual Recognition of Funds scheme	Improved distribution

Source: KPMG International, 2015.

In many cases, these changes have been made to encourage inward investment in the hope of strengthening internal capital markets and economies. Indeed, in some cases, regulators have started to shift the balance towards quasi-protectionist measures. Taiwan's recent regulation for offshore managers requires asset managers to keep at least US$161 million in assets under management (AUM) within Taiwan.[1] Singapore requires asset managers to maintain more than US$350 million of AUM within the country.

For the more mature markets — China, Australia and Singapore in particular — changes in investment management regulation reflects a desire from government and financial authorities to create a regional 'export hub', performing a similar function as Luxembourg or Ireland does in Europe. And it is these markets that have been behind the creation of three new 'passport' arrangements aimed at making it easier for foreign and local investment managers to break into the region.

[1] http://www.asiaasset.com/news/TWfscoffman_ch0804.aspx

New passports available

While Australia was the first to suggest the formation of a passport arrangement for Asia Pacific, the first solid steps towards an agreement in the region came in the form of the Hong Kong and Mainland China Mutual Recognition agreement. Essentially, the arrangement allows funds managed in one territory to be distributed in the other, albeit subject to a quota system. The agreement came into effect on 1 July 2015 and, since then, it is believed that more than a dozen funds on each side of the 'border' have applied to participate.

In September 2013, Australia's vision came into being with the signing of a proposed Asia Regional Funds Passport (ARFP) agreement. South Korea, New Zealand and Singapore were the initial signatories, with the Philippines and Thailand joining more recently. Progress to formalize the agreement has been slow, however, and — while a Statement of Understanding was signed at the Asian-Pacific Economic Cooperation Conference in September 2015 and Japan has declared its intention to join the group — negotiations have been bogged down and Singapore has left the group (at least until certain tax considerations are clarified).

The third passport arrangement came out of the formation of the Association of Southeast Asian Nations (ASEAN) Economic Community when securities markets regulators from Singapore, Malaysia and Thailand agreed to a set of terms for a cross-border offering of collective investment schemes. The ASEAN Passport became operational in August 2014 and has already seen a handful of funds (a significant number given the actual size of these three participating markets) set up to take advantage of the passport arrangements.

The benefits of the passport systems should be significant. For the 'framework' jurisdictions, the passport arrangements could propel the growth of an end-to-end asset management industry, creating locally manufactured products and helping to recycle savings back into local markets. The passport schemes should also help participating countries to create a more diversified, investor-focused and competitive investment environment.

For local investment managers, the passport schemes help to improve access to new customers and allow for the development of more sophisticated products with a higher ceiling on AUM growth. For established managers

Passport	Participating/Signing countries	Requirements
Association of Southeast Asian Nations Economic Community	Singapore Malaysia Thailand	A track record of 5 plus years AUM of US$500 million Additional requirements related to applications, host regulator rights, notification and disclosure
Hong Kong and Mainland China Mutual Recognition agreement	Hong Kong Mainland China	Requirements are set out in the mutual understanding in six key areas: 1. Types of recognized funds 2. Eligibility requirements for management firms 3. Approval and vetting process for recognized funds 4. Fund operation 5. Disclosure of information 6. Investor protection
Asia Regional Funds Passport	Australia South Korea New Zealand Philippines Thailand Japan (announced)	Operational and regulatory requirements are being developed in seven main areas: 1. The managers' track record 2. Capital adequacy 3. Minimum AUM 4. Audit requirements 5. Custody arrangements and investor restrictions 6. Distribution and marketing 7. Regulatory reporting and supervision

Source: KPMG International, 2015.

outside of Asia, the creation of these passports offers the opportunity to access a huge retail investor base through a single regional office and with a more straightforward marketing process.

Knowing when to pull out your passport

Before buying a plane ticket and setting off to set up a new regional office, investment managers with no substantial existing footprint in Asia may want to do some careful thinking. The reality is that the fund distribution landscape across Asia Pacific is continuing to change while, at the same time, the competitive pressures are building. Everybody wants first-mover advantage but nobody wants to make the wrong move.

Part of the consideration will depend on who your long-term target investors are for the region. The retail market is moving quickly and competition is high; those looking to position themselves for what is expected to be a growing pool of institutional and pension fund money will need to consider what local presence will be required to gain a competitive advantage with these (often very domestically focused) new investors.

Foreign players will also need to spend some time researching the various markets, agreements and regulations to fully understand where best to domicile their Asia Pacific business. For now, those markets belonging to the ARFP scheme seem to have the upper hand in terms of market access and usability, but the ASEAN Passport also seems to be gaining good traction and should benefit from the development of the ASEAN Economic Community. And some markets may end up positioning themselves at the nexus of more than one scheme (like Singapore seems set to do).

The short-term challenge is ensuring that prudence does not turn into paralysis. Yes, there are hundreds of potential scenarios and thousands of important regulations but — with the right local advisors and regional perspective — foreign and local participants should find that these passport schemes could offer local managers unprecedented growth and foreign managers their first big steps into the Asia Pacific region. ■

> “Foreign and local participants should find that these passport schemes could offer local managers unprecedented growth and foreign managers their first big steps into the Asia Pacific region.”

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The insurance innovation imperative

By **Gary Reader,** Global Head of Insurance
By **Mary Trussell,** Global Insurance Innovation and High Growth Markets Lead

Gary Reader

Mary Trussell

Insurers and intermediaries know that innovation has the potential to disrupt their current business and operating models. And they know that they need to innovate faster than their competitors to defend and grow their business. Yet few have found a 'winning formula' for embedding innovation into their people, products or processes.

Feeling the disruption

The fact that new technologies, innovations and business models are changing the dynamics of the insurance market is clear. More than 8 in 10 insurance executives responding to our recent survey, *Innovation in Insurance,* said that they believe their organization's future success to be tied closely to their ability to innovate ahead of their competitors.

But with new entrants, new technologies and new business models emerging at an increasingly rapid pace, many insurers are also concerned that innovation will bring more disruption than value. Many are already feeling the heat. In fact, almost half of our survey respondents said that their business models were already being disrupted by new, more nimble competitors.

For some, the risk of disruption and the opportunity for competitive advantage is driving a renewed focus on innovation. In a recent interview with John Geyer, Senior Vice-President of MetLife's

Innovation Program, for the report, *A New World of Opportunity: The innovation imperative*, John noted: "If somebody's going to disrupt our industry, it might as well be us."

Indeed, new technologies are reducing losses and costs while saving lives and increasing customer satisfaction, reducing risks and driving new business models and consolidation within the industry. New advances such as driverless cars, machine learning, home sensors and 'robo-agents' empowered with artificial intelligence and mobile payments offer a world of opportunity for insurers.

The capacity and capability to innovate

While many insurers recognize the vast possibilities that innovation brings, many seem reluctant to be first out of the gate. This is not entirely surprising; most organizations responding to our survey reported that they lack the hallmarks of an innovative organization, such as dedicated budgets, formal strategies, executive-level support and measurement processes.

Even those that want to take first-mover advantage (as almost a third of our respondents' claim they wanted) face significant challenges catalyzing innovation. In part, this comes down to capacity: 79 percent of respondents across the globe told us that they were already running at full tilt just keeping up with their core requirements.

Capability is also a key concern. Lack of skills and capability was ranked by 74 percent of respondents as a top three barrier to innovation, particularly for smaller and mid-sized organizations and those based in Europe. Simply put, insurers know what they need to do in order to drive innovation but recognize they lack certain skills to achieve it.

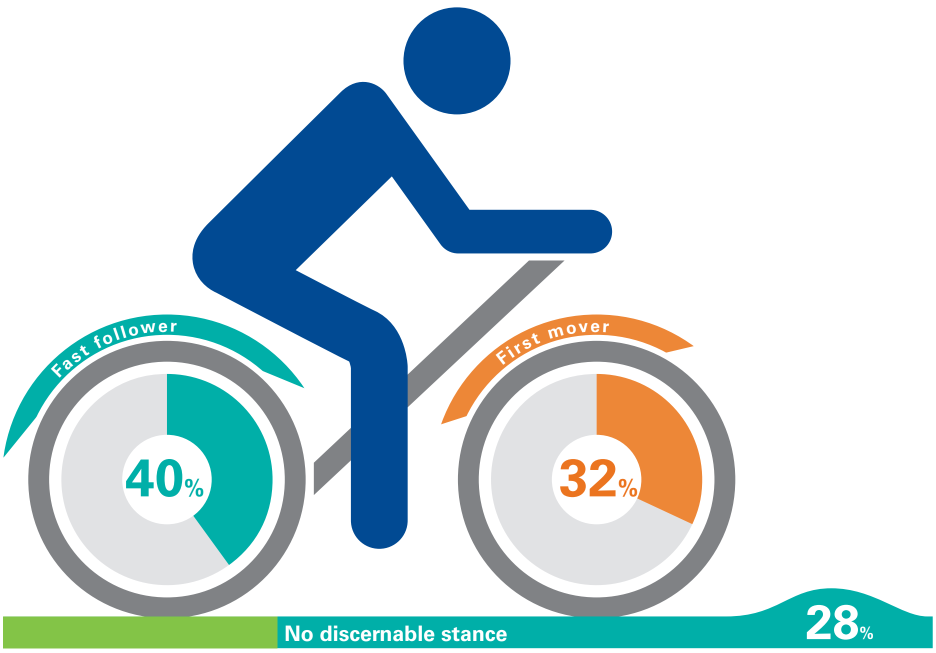
Are all disruptors disruptive?

Our research suggests that some perceived disruptors may actually be partners for insurance organizations seeking to innovate.

As Steven Mendel, CEO and co-founder of Bought By Many, notes: "Yes, we want to disrupt and change the current process. But our real focus is actually on partnering with insurance organizations to drive new business and help them build longer-term relationships with their customers. We're much more of a friend to the insurance sector than we are a foe."

Shaun Williams, CEO of Life Insurance Made Easy (LIME), agrees: "We're already working with some of the world's leading traditional insurance organizations to turn our platform into a new channel and source of innovation."

First mover versus fast follower for innovation



Source: KPMG International, 2015.

> "Almost half of our survey respondents said that their business models were already being disrupted by new, more nimble competitors."

To be fair, most insurers have certainly been working hard to improve their innovation strategy and capabilities. Many have already implemented cultural change programs focused on fostering innovation and training programs to develop idea generation and innovation skills. Others have put their sights on widening their innovation ecosystem by engaging in partnerships with academics, FinTechs and other third parties to drive innovation. Some have even changed their business models or created innovation 'hubs' or 'labs'.

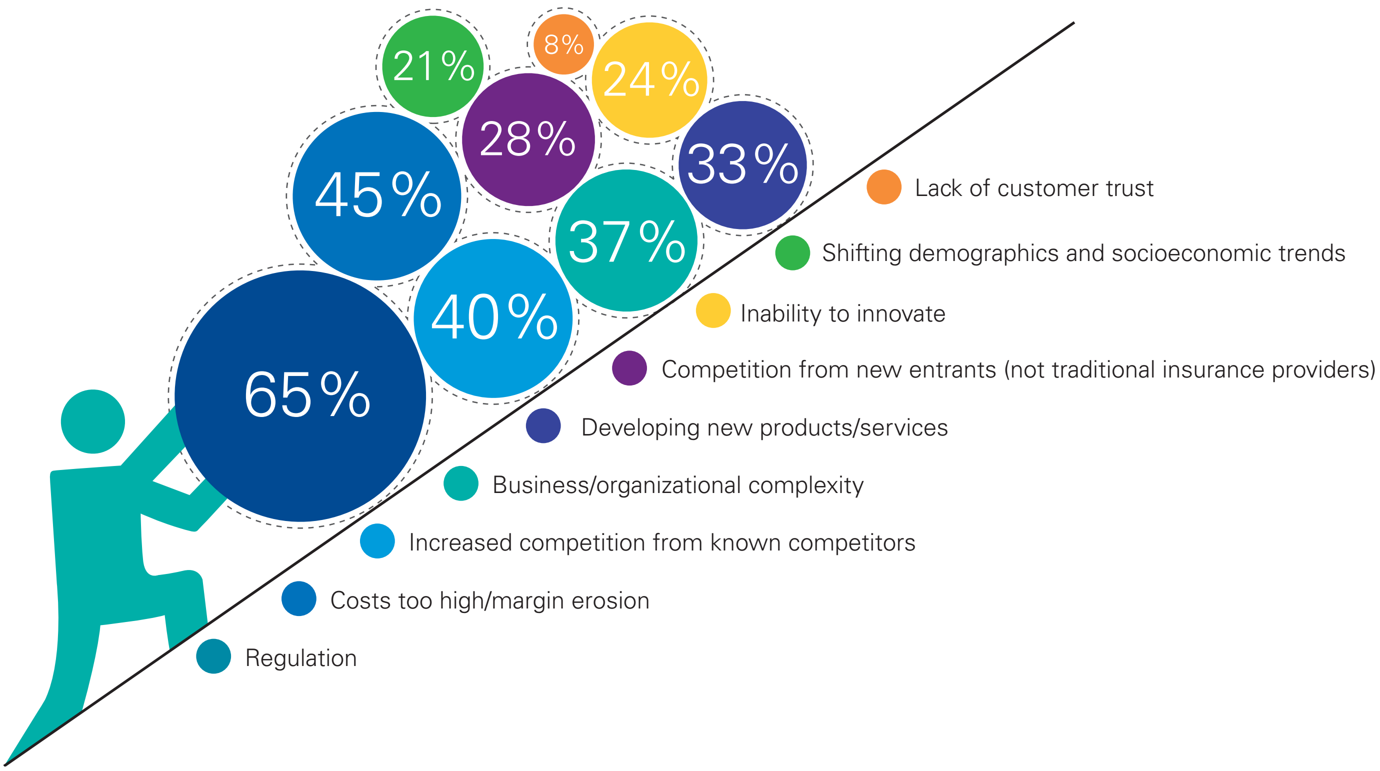
Lessons from leaders

Our experience suggests that while all of these previous initiatives are valuable, few organizations have been bold enough in their objectives or their execution to truly drive change. Based on our research, our interviews and our experience, we have identified six key ways that leading insurers are becoming more innovative.

1. **They are focusing on creating a customer-centric culture.** While more than half of respondents say they have conducted a cultural change program in the past 5 years, our experience suggests that they may have focused their efforts in the wrong area. Rather than trying to become more 'innovative', insurers may instead want to become more customer-centric which, in turn, will drive innovation.

2. **They are willing to disrupt their existing business models.** Doing more of the same, only faster, is not a recipe for long-term growth. Leading insurance players recognize the need to innovate not only product and service development, but also how they approach innovation itself. Insurers and intermediaries need to be willing to try new models and partner with new stakeholders to truly compete in an innovation-led competitive marketplace.

What are your organization's biggest challenges in the next 2 years?



Source: KPMG International, 2015.

3. **They apply agile and dedicated leadership.** Innovation requires leadership, strong executive support and clear vision. There's no secret engine behind a door that creates innovative energy for an organization. It's not about having the best game plan; it's about having a coach that knows which players to put in the field to execute on the game plan. That's how goals are scored.

4. **They mitigate risk by investing and experimenting.** The best companies have discovered ways to link their investments to the expected frequency and severity of risks to ensure they are appropriately matching investment to risk. They have started to experiment with new business models. Looking at the viability of their current business model and the role of technology in their competitive strategy, they are also exploring new business models and businesses as the profile of risk changes.

5. **They understand why they are investing.** While most organizations report that they measure their return on their innovation investments in some way or another, the leading insurers are working to ensure that they have the right alignment with business objectives and are broadening their metrics beyond simple financial ROI calculations to include more subjective measures such as public reputation or customer engagement.

6. **They learn from others.** We believe partnerships will be key to future success, but we need the right structures, models and infrastructure in order to create value. Large organizations need to learn to partner and all organizations need to learn to partner effectively. Consider alliances with partners outside of insurance to accelerate customer benefits and expand the value chain.

The road ahead

Our research and discussions with established and start-up players suggest that — to make the most of this new world of opportunity — the insurance industry needs to pivot from a traditionally risk-averse culture to one that encourages experimentation while mitigating financial risk.

To achieve this, insurers will need to tap into new sources of innovation, accessing fresh ideas from employees, customers, investors and partners which, in turn, will require progressive leadership at the top of the organization.

The innovation imperative is clear for insurers. Now it's time to make the most of the world of opportunities that exists for those bold and innovative enough to seize these opportunities to create competitive advantage. ■

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Gary has led KPMG's global insurance practice since October 2014. His career with KPMG has spanned over 28 years, 25 of which have been focused on the insurance sector — as an audit partner from 1996–2000, consulting partner from 2000–2011 and, most recently, as a markets partner. In that time, he has worked in all three regions of KPMG, and his roles and work have taken him to multiple countries. In addition to running our global insurance practice, Gary is the global lead partner for one of the largest insurance firms in the world.

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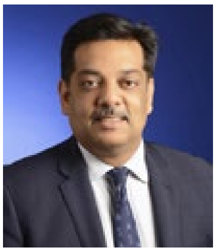
Mary brings deep expertise covering a broad range of insurance markets — from life and health and personal lines to specialty risks and reinsurance — across Asia Pacific, Europe and North America. Having spent most of her career based in London, Mary moved to Hong Kong in 2009 and most recently to Toronto in 2014. As a member of KPMG's Global Insurance Leadership team, Mary focuses on innovation and high growth markets and leads the development of many of KPMG International's global thought leadership for the insurance industry. In October 2015, Mary was appointed to lead the Insurance practice for KPMG in Canada.

A new era in bank governance: UK individual accountability rules put spotlight on international banks

By **Mike Conover**, **Partner,** KPMG in the US
By **Suvro Dutta, Partner,** KPMG in the UK

Mike Conover



Suvro Dutta

Examining the global implications and opportunities of new UK individual accountability laws.

With regulators in the United Kingdom rolling out the Senior Managers and Certification Regime (SMR) on 7 March, 2016, this groundbreaking approach to bank governance is garnering worldwide attention — and raising the prospects that its principles will spread globally.

While the SM&CR will bring welcome strength and clarity to bank governance, it presents particular challenges to multinational banks with global matrix organizations, cross-border structures, staffing, systems and transactions. These banks must now revisit and recalibrate their governance practices to accommodate the SMR's emphasis on individual accountability and local legal entities.

Although the banks must grapple with the reasonable steps necessary to comply and possible unintended consequences on their operating models, some smart bank boards recognize the SM&CR to be an opportunity to embed governance standards and enhance culture that can drive stronger long-term performance for shareholders.

Senior Managers Regime adds individual accountability

The SM&CR arises from recommendations made by the UK's Parliamentary Commission on Banking Standards (PCBS), which was set up following the LIBOR rate-fixing scandal and described existing regulations as a "complex and confused mess."

With many commentators stating their belief that the banks had possibly grown too big and complex to manage, the SMR is amongst a wider set of tools and regulations that could improve bank governance and realign risk and reward. This, in turn, could ultimately benefit shareholders, since better decision-making may result when executives have clear individual accountability for their actions, rather than collective accountability at the institutional level.

"A lack of personal responsibility has been commonplace throughout the industry. Senior figures have continued to shelter behind an accountability firewall," observed Andrew Tyrie, Chairman of the Treasury Select Committee and the PCBS, in describing the PCBS findings. "Where the standards of individuals, especially those in senior roles, have fallen short, clear lines of accountability and enforceable sanctions are needed."

Noting that the SMR "is not meant to be radical or life-changing," Andrew Bailey, Head of the Prudential Regulation Authority (PRA), explained in a speech that, "We do want to avoid what the PCBS described as the *Murder on the Orient Express* outcome when firms get into trouble, which is akin to the 'everyone and no-one' is responsible but everyone is connected to the event. Clarity of responsibility is I hope unobjectionable."

The regime is also garnering international profile, including in the US, where US Securities and Exchange Chair Mary Jo White described the SMR as "a very intriguing set of changes."

The topic is likely to increase momentum at the G20 summit as the Bank of England Governor, Mark Carney, is also the Chairman of the Financial Stability Board (FSB). If it's endorsed by the G20, then one would certainly expect further rules and regulations on the lines of SMR.

To be overseen by the PRA and the Financial Conduct Authority (FCA) — and applying to all banks in the UK, whether they be locally headquartered retail brands or wholesale offices of foreign-based banks — the new regime is designed to make senior individuals within financial firms personally accountable for breaching regulations or causing serious damage to their institution.

Global banks face Senior Managers Regime challenges

While the SMR may be the necessary remedy for past governance failings, many banks face sizable challenges in light of the regime's focus on precisely pinpointing individual accountability.

Today, it is typical for international banks to maintain matrix management across borders, business lines and functions, with key responsibilities held by global business heads or overseas managers located offshore, and with decisions made by committees rather than by individuals. Establishing individual accountability through a legal entity lens in such a construct is a difficult challenge.

The problem is compounded by the fact that a number of foreign banks run their UK operations as a bank branch in another jurisdiction, and they do not have the formal, local governance arrangements that a UK-based bank would; this demonstrates that legal entity type individual accountability is more complicated for branches.

Issues also arise from global banks' cross-border transactions since they often apply remote booking models and utilize regional or global trading hubs, by which a transaction is not domiciled in the jurisdiction where the trade may have originated. These practices make it challenging to clearly define accountability, especially for senior managers in the UK legal entity. With the SMR driving regulators to ask, "Who actually makes the key decisions and understands the risks?" overseas senior employees may also find themselves pulled into the regime.

In addition, if things go wrong and a bank finds itself in financial crisis or difficulty, regulators will ask senior managers to prove they took 'reasonable steps'. This has prompted a lively debate on what constitutes adequate steps, especially as it will be applied in hindsight. While the banks may take obvious actions, such as maintaining better minutes, they should also ensure they have effective governance structures, with clearly defined accountabilities at the outset, and high quality legal entity management information systems. This will enable them to respond with a more robust defense if they are challenged regarding the reasonable steps taken.

UK bank regulation could trigger unintended consequences

While the SMR has been carefully designed to improve governance within the UK banking sector, it may also drive other, unintended consequences. For example, in their rush to comply, the banks may end up with added bureaucratic layers, mountains

Briefly, the SMR includes:

- **Senior Managers Regime:** Members of bank boards and executive committees require 'statements of responsibility' and a 'management responsibilities map' to define their accountability. With the presumption of responsibility for regulatory breaches, these individuals could face both civil penalties and criminal sanctions.
- **Certification Regime:** Developed with the idea of ensuring that a wider population of bank staff is part of a regulatory regime, this layer includes bank employees who sit below senior managers but with the ability to cause significant harm to the firm or customer through their duties. Subject to civil sanctions for their actions, they will be self-supervised by each bank, which must 'certify' them on an annual basis.
- **Conduct Rules:** Applying to senior managers, certified and non-ancillary staff, all suspected and actual breaches of stricter, simpler and clearer new conduct rules must be reported promptly to the regulator. The banks must also deliver tailored, role-specific training on breach monitoring and notification to support meaningful cultural change.

of attestations or duplicative processes but may still fail to address the core objective of improving the bank's accountability framework.

They may actually create more silos and complex fault lines between legal entities and group structures.

The SMR could also lead banks to revise their current operational structures and transactional activities, or even rethink their global operating models, ultimately shifting the balance of power and control from the head office to the local operation. This might strengthen local accountability but could lead to inconsistent application of global control standards across various parts of the group.

In addition, outsourcing and offshoring support initiatives, which the banks enthusiastically embraced over the past decade, may face greater scrutiny, and indeed, a reduction under the SMR, resulting in significantly increased costs of doing business.

Some analysts also suggest that the SMR could create a 'flight of talent,' due to the perceived criminal and civil risks now associated with those posts, functions or operating locations. This could make it difficult for international banks to recruit board and senior leadership candidates at a time when the industry needs to attract the most talented and competent business leaders.

In light of these potential impacts, it is probably appropriate that the SMR be extended beyond banking to the wider global financial services industry, albeit proportionately, to promote convergence and a level playing field. In due course, if the implementation is successful, there may be merit to consider broadening the regime more widely to other industrial sectors, as better standards of governance would be welcome across sectors where heightened governance practices and standards could be beneficial.

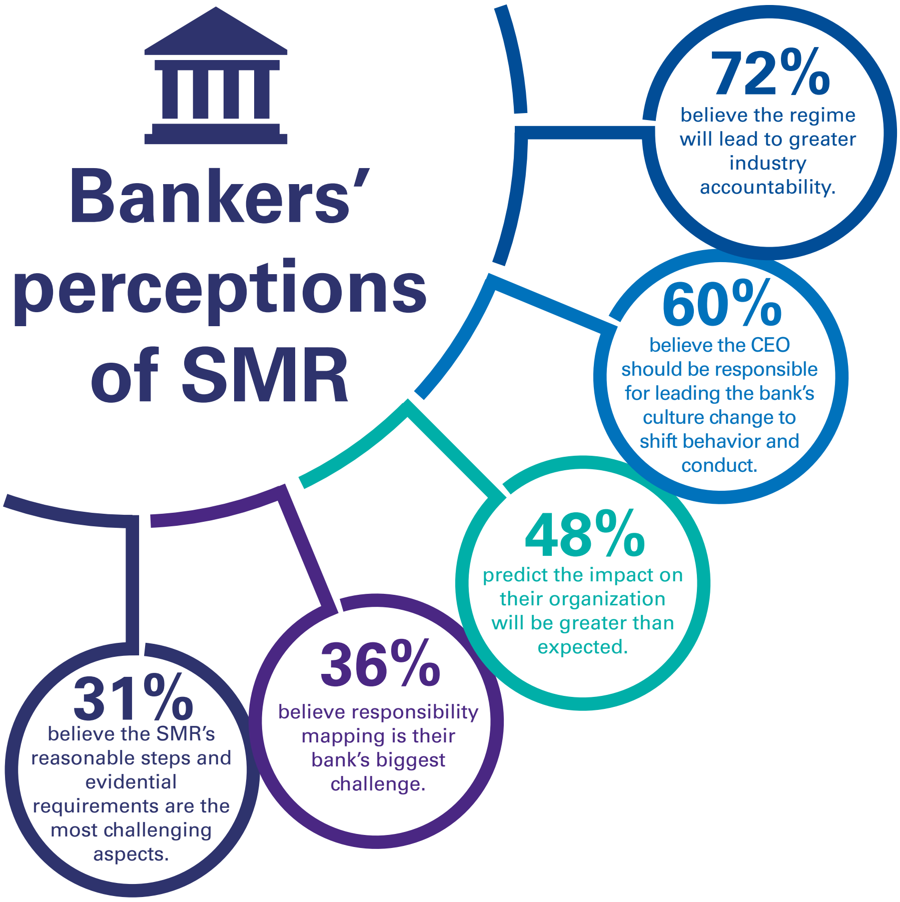
Banks prepare for SMR impacts and opportunities

In light of the challenges outlined above, it's understandable that many banks are scrambling to meet the new regime's tight implementation timetable.

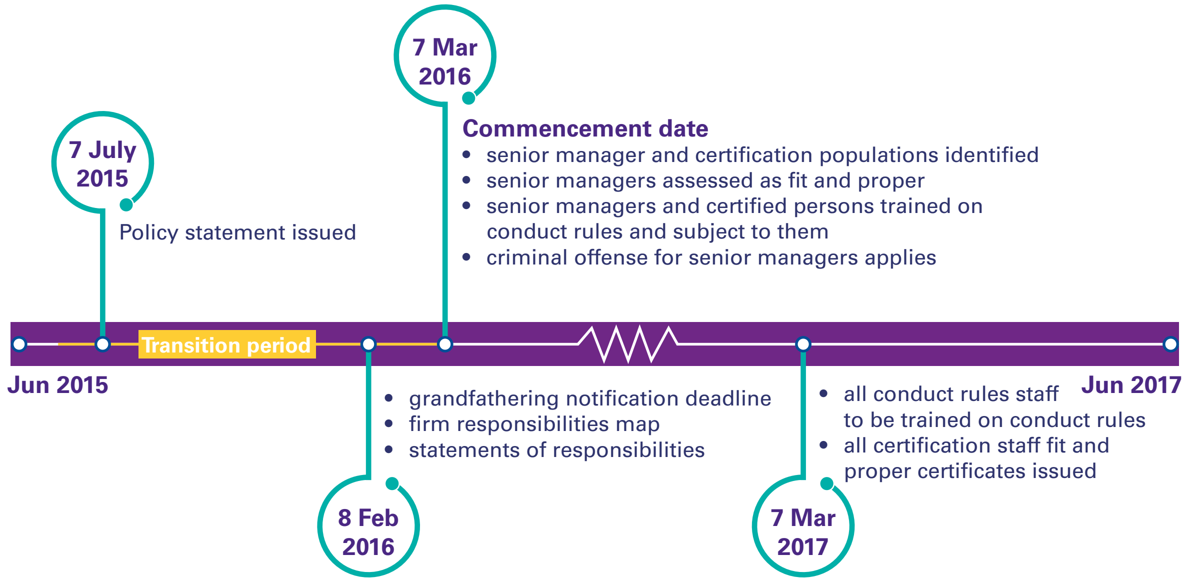
Even those banks that enhanced their global governance and risk management practices in recent years may struggle to adapt to the UK standards without significant overhaul and reassessment of their current arrangements. This encompasses clearly mapping out and putting into practice statements of responsibilities that can be highly complex and political and involve considerable internal culture change. Banks may also realize that the scope of preparatory work is more extensive than expected, such as the need for new employee training, internal monitoring and reporting capabilities to satisfy the Certification Regime.

This realization among bank leadership was evident from KPMG's industry roundtables of senior bankers during 2015. While 72 percent of executives said they believe that the regime will ultimately lead to greater accountability in the industry, almost half (48 percent) predicted that the impact on their organization would be greater than expected. More than a third (36 percent) said that responsibility mapping is their bank's biggest challenge, while 31 percent pointed to the SMR's reasonable steps and evidential requirements as being the most challenging aspects.

To successfully manage the structural and behavioral changes created by the new regime, the banks require clear senior level leadership, steering committee oversight and comprehensive work plans to be well underway by the end of 2015.



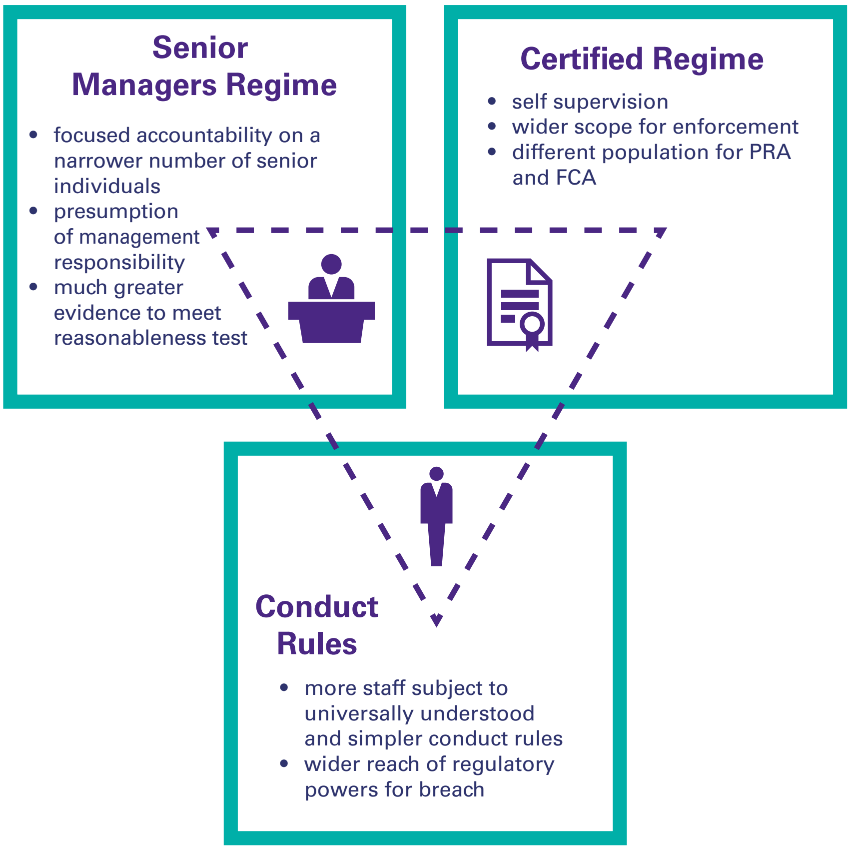
Source: KPMG Industry Roundtable surveys in 2014/2015.



Source: KPMG Industry Roundtable surveys in 2014/2015.

Although some banks may treat the SMR as a 'box-ticking exercise,' smart boards will see the new regime as an accelerator to enhance governance, gain a better line of sight across their organization and drive enhanced business performance.

With an eye to the SMR model soon spreading beyond the UK shores, Bill Michael, Global Head of Banking and Capital Markets, observes that, "The kind of strong governance introduced by the SMR is a good thing, and by taking the right steps today, banks can both meet the challenge of achieving regime compliance and also prepare for any potential longer-term impacts on their operating models." ■



Source: KPMG Industry Roundtable surveys in 2014/2015.

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Publications

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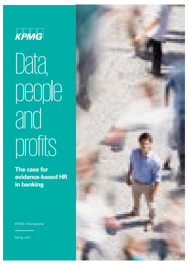
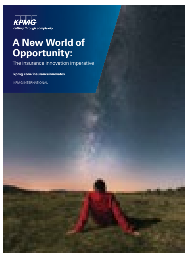


Data People and Profits: The case for evidence-based HR in banking.

November 2015

Banking executives will often tell you that their people that are their greatest asset. In this report, KPMG examines the broader strategic implications of gaps in the adoption of data and analytics and business decision-making.



A New World of Opportunity: The insurance innovation imperative

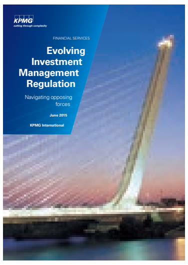
September 2015

In our recent survey of insurance executives globally, 83 percent said that their ability to innovate is tied to their future success. To achieve this, insurers will need to tap into new sources of innovation, accessing fresh ideas from both inside and outside their organizations.

The Power of Alliances: Partnering for growth in the insurance sector

November 2015

This report focuses on three main areas of partnership where insurers have been particularly active: bancassurance, Financial Technology (FinTech) and innovative distribution. The report provides actionable insights and lessons to help you create more sustainable and value-driven partnerships and alliances.



Evolving Investment Management Regulation: Navigating opposing forces

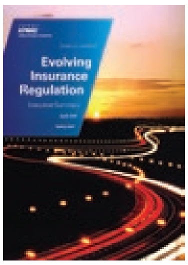
June 2015

Highlighting the latest regulatory issues affecting the investment management industry on a global scale — specifically distribution, cyber security, conduct and culture.

Accessing hedge funds through managed accounts: The future is now

November 2015

The hedge fund industry is changing — with institutional investors, in particular pension funds, becoming an increasing proportion of assets under management.



Evolving Insurance Regulation: Executive Summery

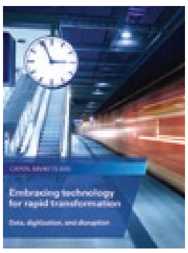
April 2015

2015 is seeing international developments dominate regulatory change in the insurance industry. The IAIS's proposed new global insurance capital standard, the implementation of Solvency II and the completion of IFRS 4 Phase 2 leave no doubt that we are witnessing a new era in insurance regulation.

Evolving Banking Regulation Part Three: Data and Technology: The Regulatory and Business Challenges

October 2015

In the current business environment, banks face a complex mix of interrelated regulatory, economic and commercial pressures that are driving changes in bank structure. This report looks at recent and forthcoming banking regulation.

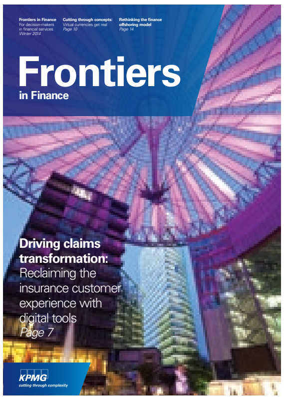


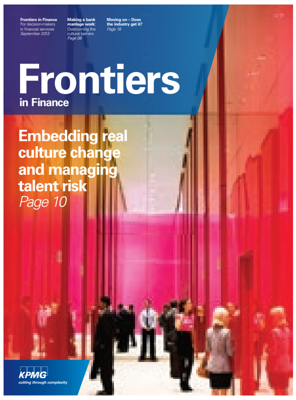
Embracing technology for rapid transformation: Data, digitization and disruption

March 2015

Capital markets businesses have a lot of distance to cover on the road to leveraging better technology for faster business transformation that so many entities seek. KPMG's Capital Markets practice takes a view of where the industry is now and where it is headed.

Missed an issue of *Frontiers in Finance*?





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Frontiers in Finance is a forward-looking collection of market insights, thought-provoking perspectives and sector-specific issues that impact key decision-makers of financial services organizations around the world. All articles are written by industry-leading and experienced professionals from across our Global Financial Services practice.

KPMG's Global Financial Services practice has more than 34,000 partners and professionals across our global network of 155 member firms, providing audit, tax and advisory services to the retail banking, corporate and investment banking, investment management and insurance sectors. Each one of our professionals brings ideas, innovation and experience from across this vast network, to the benefit of each of our financial services clients around the world. We serve leading financial institutions with practical advice and strategies backed by world-class implementation. We believe our commitment to the industry, our sector-specific insights and our passion for serving our member firms' clients to the very best of our abilities help us stand out.

We welcome the opportunity to discuss how KPMG member firms can help you achieve your business objectives.

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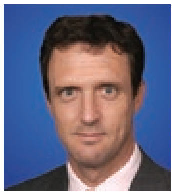

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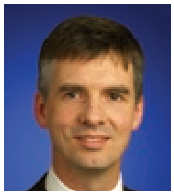

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