

## **Life insurance: Joining the dots to see the future**

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### **Abstract**

In 2014 the global insurance industry is finally emerging from the combination of financial turmoil and economic uncertainty that has challenged international property-casualty and life annuity insurance companies for the last several years.

Although it remains premature to unequivocally state that the difficult times are behind the industry, many signs point to the significant opportunity. In Asia-Pacific, for example, rising individual wealth and ageing populations are enticing areas of product expansion and revenue growth.

The Indian economy riding on the wave of populist sentiments in electing a majority government and is poised to take major strides forward. Insurance sector is one of the key factors expected to hold sway in India's march towards establishing a global economic powerhouse.

For every GDP driver that the government is looking to improve there are risks strewn across the business landscape. In India's quest to move up the value chain of insurance vis a vis innovation we are glossing over the challenges arising out of striving, managing and guarding data, the rampart of our thrust towards economic premiership in a globalised interconnected world. We are carrying forth the flag of 'Made in India' but this race to be sought after provides of services and products we may be guilty of being lax when it come to understanding, evaluating holistically or in most cases even considering the risks that operations face in these competitive times.

A veritable cornucopia of supply demand dynamics, concomitant technologies and deep interdependencies among and within economies has led to business growth disruptions and closures at a magnitude hitherto not imagined or seen.

The old guard such as 'Financial Management' and Capacity Planning' of insurance business management is now merging focuses with the young upstarts such as 'Data Analytics', Big Data', Social Media' in the race to meet, drive and channel consumer demand, a capricious beast of the best of times across price points and utility functions at a scope and scale yet unseen.

This essay looks at various life insurance product trends and how these can be sustained for competing in a future insurance market. There are 2 key factors during insurance product development, mortality risk and longevity risk. Traditional life insurance products like the term and whole life were intended to address mortality risk, more specifically the risks one dies prematurely. The primary purpose was to safety net for the families when one of the primary bread winners passed away. In recent years the focus has shifted to address longevity risks as the baby boomers reach retirement age in a time when the defined benefit pension plan has become a relic of the past.

Standing at the cross roads of 21<sup>st</sup> century the 4 most important developments that are said to have the most decisive impact over the next 10 years and the most opportunities for innovation growth and competitive differentiation

1. Changing demographic pattern for innovative product.
2. Technological innovation to suit changes in customer preferences.
3. Environmental changes in reshaping the market place.
4. Economic and political regulations and the overall impact in the growth of insurance.

**Keywords:** Life Insurance in India, Product Trends - Long Term Considerations, Life Insurance Market Dynamics, Longevity Risks, Direct Delivery Model, Data Analytics, Customer Orientation.

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### **Introduction**

'After spending several hours online, researching the amount and type of life insurance that fits her needs, the prospective buyer is ready to shop. She signs into Future.com life insurance company site, answers a few questions and uploads her last 6 months data from her fitness monitor by entering the unique identity number which tracks multiple health indicators. A cloud based underwriting algorithm pulls her medical prescription records and rates her risk profile. The site automatically redirects her to an aggregator site which offers her options from several insurers with multiple riders. She closes in on a policy and sets up an automated monthly

premium debit from her checking account. The insurer sends her a tact notification that the coverage is effective and her e-policy would be processed once the server synchronizes her web documents like her passport, UID and biometrics over a virtual server based KYC compliance system. POP she gets a new mail with the attached policy in her Demat account.' Total time taken from start to finish is 10 minutes.

Admittedly this is a futuristic scenario, but it's not implausible given the current trends. A research at Capgemini says that roughly 75% of buyers are doing an online research prior to purchasing, and almost half of that research is conducted on mobile devices. MD of the Boston Consulting Group in NY

City notes that the life insurance carriers are increasingly more comfortable using direct channels, online and mobile based compared to integration with their traditional channels.

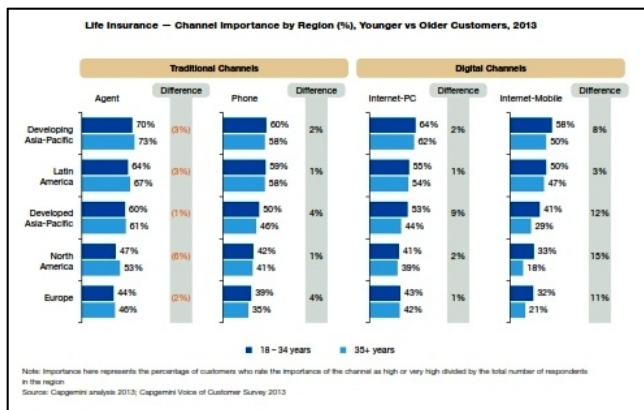


Fig 1: A graphical representation of Life Insurance Channel used region wise in various age groups

As the general health of the population improves over time, people are living longer. The blessing of a longer life is accompanied by the need to generate sufficient income in retirement to be able to enjoy the extra years and pay for long term care when health status declines. Life insurance insurers are increasingly targeting product developments to meet the needs.

The impact of technology on the life insurance industry is huge. The technological advances and consumer preferences are shaping product designs and sales, the internet was initially used by insurers to promote their brand and provide some general communications, increasingly it is used to recruit insurance producers and actually conduct the business of insurance. Access to the internet using mobile devices is rapidly changing the environment again. Insurers are beginning to explore how to use social media such as Facebook, Twitter etc. Monitoring insurer activity in this emerging area is becoming a challenge for insurance regulators. The individualization of social media experience presents many compliance conundrums for insurers and regulators.

As customers become accustomed to the ease, elegance and intuition of the Apple/Amazon 'experience', they want the same accessibility, transparency and responsiveness in their life insurance and pension products. Advances in processing capacity, customer profiling and risk analytics are now opening the way for a new generation of 'smart' policies while being as affordable and easy to understand/compare as today's off the shelf products these policies would be fully customized and able to adapt to the individual customer's changing needs. Crucially, the technological developments that are making this new generation of policies possible are also making it easier for new entrants to break into the market at relatively cost.

**The changing demographic pattern and need for innovative products**

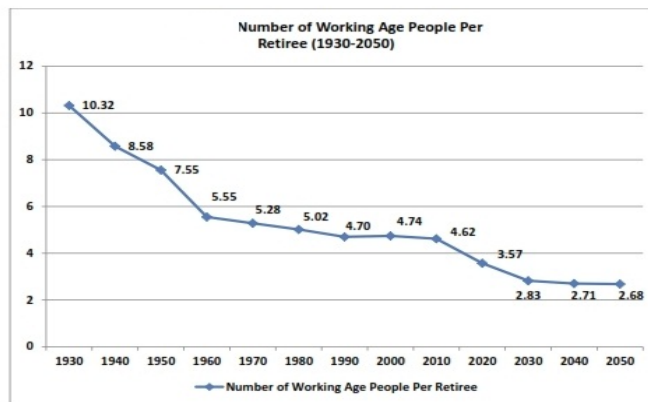
The life and pension sector is facing a rapidly evolving and potentially disruptive set of market dynamics.

**1. An older population:**

The numbers of people aged over 60 will more than triple than over two billion by 2050 creating a huge extra demand for

retirement solutions. 'The Hindu' in a report on 5<sup>th</sup> April, 2015 said that India now has over 100 million citizens over the age 60, five times the number in 1960.

Independent India was born an extraordinarily young country. The median age was just a little over 21 and nearly 60% of the population was under 25, with life expectancy just 36 years, the issue of managing a ageing population must have seemed like challenges for the distant future.



From: U.S. Department of Health and Human Services, Center for Disease Control, National Health Expenditure Survey.

Fig 2: The dependency ratio in US (as there was no reliable graph available about India)

Much has changed since: as health and nutrition has improved, average life expectancy has climbed to over 66 years. Simultaneously with better education and access to health, women are having fewer children than ever before. The median age has climbed to nearly 27 and for the first time in history less than half of the country is under 25. Seniors now make up about 10% of the population. By 2050, India will have nearly 300 million seniors and make up about a fifth of the population, as per projections from the population division of the Department of Economic and Social Affairs of the UN Secretariat. Compared globally, these numbers seem small; by 2050, a third of Brazil's and China's population will be seniors and a third of Japan's population is over 60. India's old age dependency ratio-the number of seniors for every 100 working age persons-is under 10and even by 2050, will not have crossed 20.

**2. An increasingly wealthy population**

The number of middle class people (earning more than Rs 50/day) will grow from 430 million in 2000 to 1.2 billion in 2030, with two thirds of this growth coming from India and China, creating much more wealth to protect and more demand for life cover.

**3. An increasingly connected global population**

The number of people connected to the internet will increase from 1.8 billion today to 5 billion by 2020, changing how customers interact with business and their expectations on the speed and intuition of response.

The Insurance Industry in India consists of 52 insurance companies of which 24 are in the life insurance business and 28 are non-life insurers. Among the life insurers Life Insurance Corporation (LIC) is the sole public sector company. Apart from that among non-life insurers there are 6 public sector insurers. In addition to those there is sole national reinsurer, namely the General Insurance Corporation of India. Other

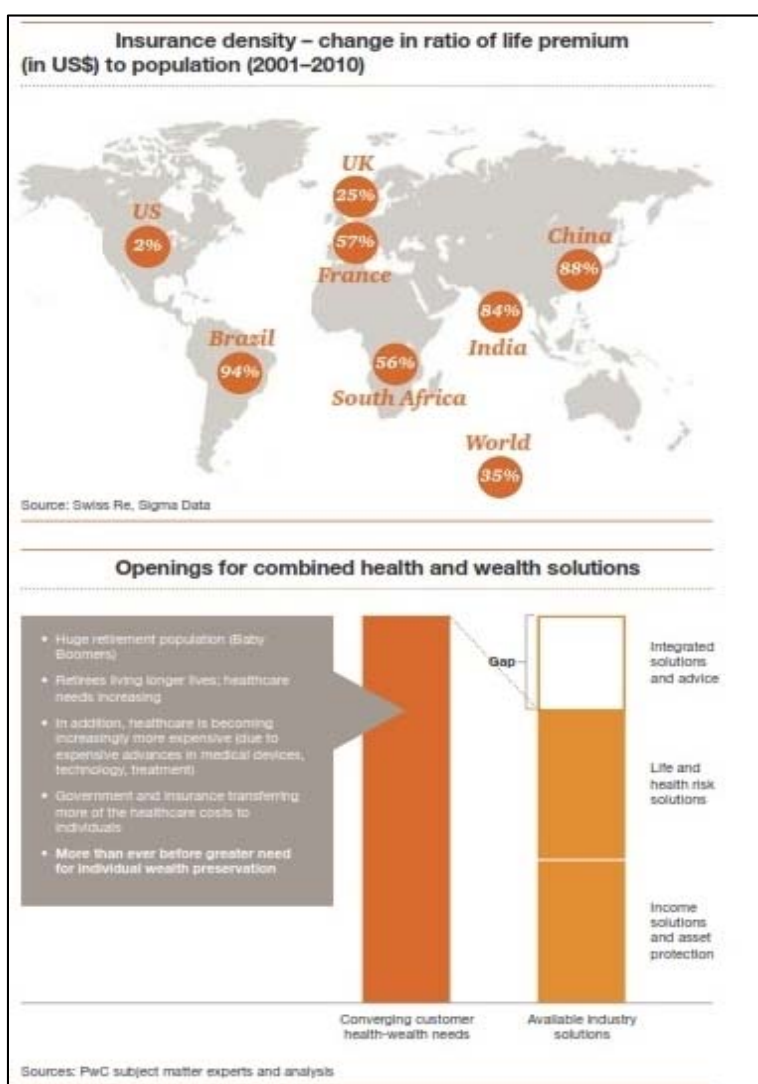
stake holders of the insurance market includes agents (individuals and corporate) brokers, surveyors and third party administrators servicing health insurance claims. Out of 28 non-life insurance company, five private sector insurers are registered to underwrite policies exclusively in health, personal accident and travel insurance segments. They are the Star Health and Allied Insurance company ltd, Apollo Munich Health Insurance company ltd, Max Bupa Health Insurance company ltd, Religare Health and Cigna TTK Health Insurance company ltd. There are 2 more specialized insurers belonging to public sector, namely Export Credit Guarantee Corporation of India for credit insurance and Agriculture Insurance Company ltd for crop insurance.

**Market size**

India’s life insurance sector is the biggest in the world with about 36 crores policies which are expected to increase at a CAGR of 12-15% over the next 5 years. The insurance industry

plans to hike penetration levels to 5 percent by 2020 and could top the US\$ 1 trillion mark next 7 years. The total market size of India’s insurance sector is projected to touch US\$350-400 billion by 2020 from US\$ 60 billion in FY 13-14. The general insurance business in India is currently at Rs 77,000 crores (US\$ 12.4 billion) premium per annum industry and is growing at a healthy rate of 17 percent. The 12,606 crore (US\$ 2.03 billion) domestic health insurance business accounts for about a greater of the total non-life insurance business in the country. Investment corpus in India’s pension sector is anticipated to cross USD 1 trillion by 2025, following the passage of the Pension Fund Regulatory and Development Authority (PFRDA) Act 2013, according to a joint report by CII-EY on pension business in India.

India’s insurable population is anticipated to touch 75 crores in 2020 with life expectancy reaching 74 years. Furthermore life insurance is projected to comprise about 35 % of the total savings by the end of this decade as against 26% in 2009-10



**Fig 3:** The changing insurance density of the global market and scope for health insurance

The future looks interesting for the life insurance industry with several changes in regulatory framework which will lead to further change in the way the industry conducts its business and engages with its customers. Demographic factors such as growing middle class, young insurable population and growing

awareness of the need for protection and retirement planning with support the growth of Indian life insurance. The life and annuity sector has many reasons to be upbeat about the future - a larger and longer living global population and increasing demand for retirement products. In turn the increasing

affluence of people within the high growth markets of South America, Asia, Africa and the Middle East (SAAME) is creating a growing need for wealth protection. If the shakeout in other commercial sectors teaches us anything, it is that no business including insurance is immune from today's rapid and relentless shifts in technology and customer expectations. SAAME markets are seeing rising demands for insurance as economies expand and people acquire more wealth to protect. A survey found that nearly half of the insurance industry sees emerging markets as more important and developed market's to their company's future. Life policies are likely to be the main focus of growth for now. The relatively young average age of most SAAME markets means that demand for pension products is growing less quickly. While the opportunities may be slow to emerge the demographic profile will eventually begin to catch up with the West as health improves and people live longer.

The L&A industry is long overdue for a wide ranging reinvention. Many carriers have made adjustments in the types of policies and features they offer, but have steered cleared of the more fundamental changes, in how they connect with their prospects, communicate their value and distribute their products and services. The result has been sluggish sales overall each year and shrinking market penetration.

However L&A carriers should not be solely relying on the rising tide of an improving economy to lift all boats. Over the next five years, insurers will likely have to adapt to the fundamental sea of changes underway that are threatening to upset their business models and distribution systems.

### Longer Term Considerations

Insurers must look beyond the short term ups and downs of their own particular markets and the economy as a whole to consider a bigger picture. Here we focus on the five most important pillars for success in Life and Annuity carriers in the insurance market.

3. Achieving information fluency
4. Overcoming the regulatory changes
5. Upgrading capital management

While many SAAME markets offer strong growth potential, they can be hard for incomers to break into. There can be restrictions on foreign ownership and licenses. Even in relatively liberalized markets, new entrants may face prohibitive acquisition prices or entrenched competition from large local players. It is a telling that a number of international groups have now chosen to withdraw from some SAAME markets, while some want to refocus on core business, others have clearly faced problems in developing the critical competitive mass in these markets.

Digital distribution would allow the business to move into new markets without the need for expensive and difficult to establish branch or agency on the ground. It could be especially important in reaching remote customers, successful models in other financial sectors include Kenya's M Pesa which provides access to payments and deposits via the mobile phone network and now has 15 million customers, more than the country's entire bank together.

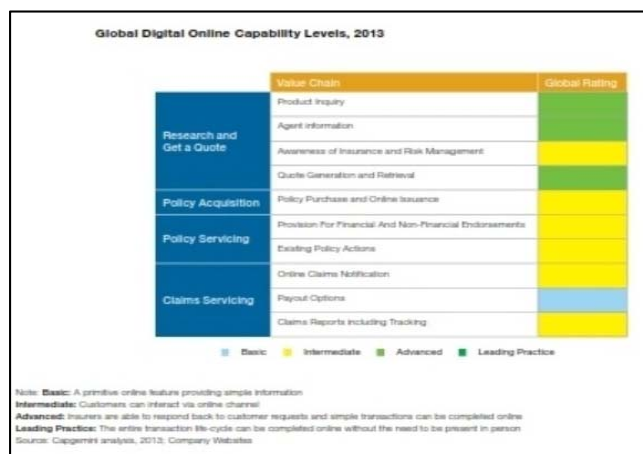


Fig 5: Online Capability Levels

Joint ventures are also going to be crucial in reaching customers and getting a foothold of the market. It is therefore important to think about what to offer potential partners that competitors cannot. This may be particular risk management on product expertise; it may also be international coverage that would allow the partner to develop its global presence.

There are currently around 600 million people aged over 60 in the world. By 2050 there will be more than 2 billion, with the SAAME markets accounting for much of its growth. China already has an ageing population relative to other major markets such as India. In turn, Brazil has more pensioners for every 100 contributing workers other than US. As the Brazilian government spends more on pensions as a percentage of GDP than Germany, France or Japan, the pension sector will need to grow quickly to relieve the pressure on the public purse.

### Urbanization fuels demand

A further spur for growth in the SAAME markets will come from rapid urbanizations over the next 30 years; some 1.8 billion people are expected to move into cities, most of them in Asia and Africa, increasing the world's urban population to 5.6 billion. By 2020 around half of the world's urban population

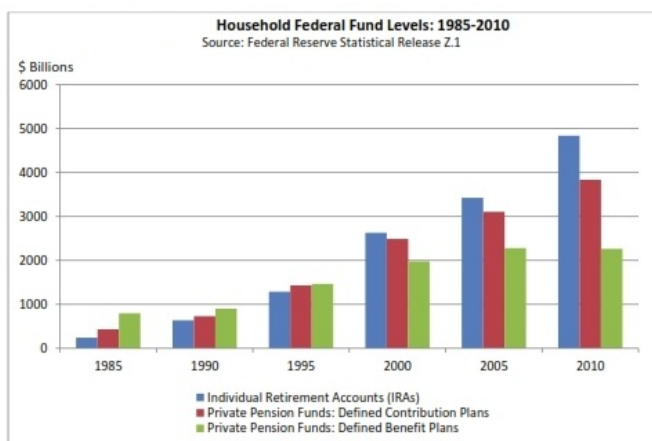
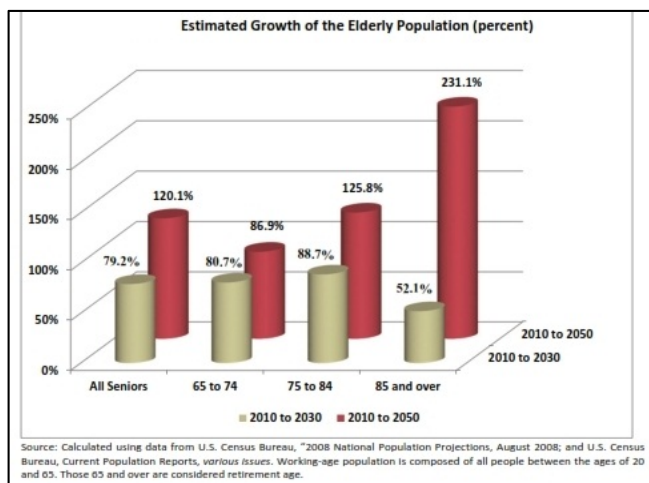


Fig 4: Comparative analysis of Individual and Private funds in retirement accounts vis-a-vis defined benefit schemes

The agility with which insurers take on these challenges and convert them into opportunities for growth and performance enhancement will potentially determine which companies are most effectively positioned to lead the industry. The five most important pillars are:

1. Transforming the growth
2. Addressing the longevity risk

will be living in Asia. Urban populations tend to have a higher demand for insurance and other financial services. In the case of Life and Annuity, the factors contributing to these include greater exposures to financial products and the need for life cover when taking out mortgage. Family sizes also tend to go down as people move off the land and into the confined cities. This leaves people with fewer children to support them in their old age and therefore increases the need for pensions and life cover. The challenge will be how to capitalize on the urban growth, while developing profitable services for rural customers.



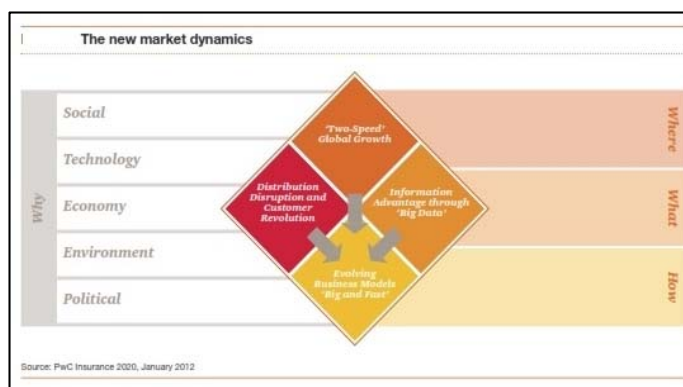
**Fig 6:** A graphical representation of Growth in Elderly population

According to one research, 84% of L&A executives believe ageing trends will continue to increase in the developed world, but 59% believe there will be a marginal shift in the global insurance product portfolio due to offsetting demographic shifts in the SAAME markets.

While the market potential of countries with low insurance penetration is clear as per data available, there are significant variations. In Mexico, Middle East and many parts of Eastern Europe, premiums as a proportion of GDP were less than 0.5% in 2010, compared to 1.67% for emerging markets as a whole. Those penetration rates underlines the importance of market developments, not only in distribution and product launches but also to educate new markets in the uses and value of life and pensions cover. The aggressive pursuit of top line growth in the SAAME markets creates its own inherent risks, including the potential for asset bubbles and misspelling. The recent curbs in commission for unit linked insurance plans (ULIPS) in India, the main stay of the life insurance market; provide a good example of the regulatory and reputational risks opened up by what had been rapid and untrammelled growth. The new controls precipitated a sharp fall in the overall life premiums in 2011, and are likely to lead to a shift towards more traditional products such as whole life insurance. More broadly, while revenue expansion is the key priority for many businesses operating in the SAAME markets, the quality of underwriting and sustainability of growth could prove to be the key long term differentiators.

The mature markets are moving in a different direction. Demand for life cover is slowing- in the US the number of life policies is the lowest for 50 years. In contrast pension growth continues to accelerate as populations' age. Mature markets are also characterized by the mounting pressures on margins and

disillusionment created by the financial crisis, which has dented public trust and fundamentally changed customers' appetite for risk. The challenges are how to develop the trusted, affordable and understandable policies that would allow life companies to re-engage with customers. State support for ageing populations is being eroded by fiscal pressure and a decline in the proportion of working to retired people (dependency ratio) in many markets. The falling back of state support has been compounded by the decline in employer provided defined benefit plans, around half the current US workforce will have neither a state nor employer supported pension plan.



**Fig 7:** Integration of Market Dynamics

As people live longer and state and employer support is withdrawn, there is an obvious need to save more for retirement. Some countries such as Australia have stepped into taking out a pension plan compulsorily. Others such as the UK are looking to influence behaviour by requiring all employers to make sure their employees are signed up for pension and thus putting the onus on the employee to opt out if they don't want to be covered. Applying such behavioural economic principles would certainly overcome some of the inertia that deters many people from putting money aside for their old age.

**Accessible Options**

1. Huge retirement population (Baby Boomers)
2. Retirees living longer lives (health care needs increasing)
3. In addition, healthcare is becoming increasingly more expensive (due to extensive advancements in medical devices, technology and treatment)
4. Government and insurance transferring more of the healthcare costs to individuals.
5. More than ever before greater need for individuals wealth preservations.

In India, New solutions inspired by behavioural economic principles are also emerging which adapt to each life stage before seeking to offer a target return for policy holders once they enter retirement. In India available study indicates that the 2006, 1.14 billion populations is going to reach 1.5 billion in 2026, while average life expectancy will increase from 63 years to 67 years for male and 68.8 years for female in 2016.

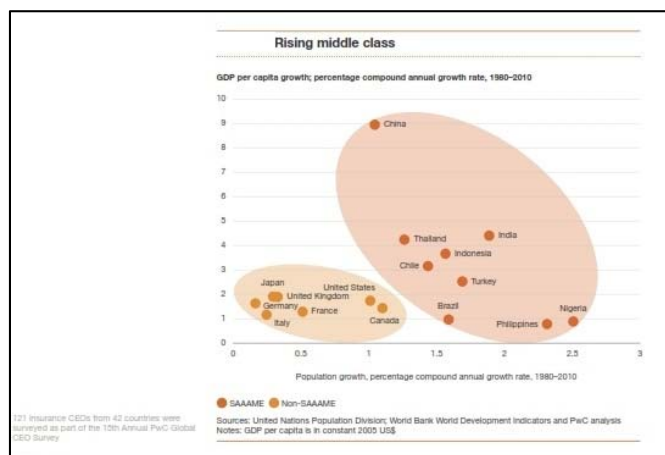
**Acute Unemployment**

However along with the population explosion, India also suffers from acute problem of unemployment. According to report around 500 million people were employed, out of this

only 10% in the organized sector and 90% in unorganized sector. However with the current social security and pension which exist mainly for the unorganized sector covers only 11% of workers leaving 89% without any formal social security and pension coverage. Effective implementation of mandatory annuitisation will however depend on a vibrant and dynamic life insurance market to supply appropriate annuity products. Annuitisation will also need support of a debt capital market to facilitate long term investments of pension assets like long term inflation linked bonds.

### Addressing the Longevity risk

Ageing populations and the new regulations expand opportunities for guaranteed life time coverage. Life spans are being extended thanks to medical advances and greater access to health insurance. Fewer and fewer people are covered by defined benefit retirement plans, just as future benefits paid by social security and become increasingly uncertain given that current payments have already started to exceed contributions to all nation's retirement programmes. As a result of this confluence of trends, consumers are increasingly worried about the possibility of outliving their assets. A survey reported, 50% have not saved enough to cover them through retirement., 40% say no matter how much they save, it won't be enough to provide sufficient retirement income. Given these concerns, and considering that roughly 10000 baby-boomer will turn 65 everyday between now and 2030, longevity risk could perhaps be the biggest growth opportunity for annuity carriers.



**Fig 8:** Graphical representation of rising middle class

Some carriers have entered the market for longevity risk on a mass scale via pension risk transfer deals, in which insurers take over defined benefit plans being run off by employers. This trend should continue for the next few years as more employers look to off load retirement obligations from their balance sheets. Longer term however with the transition from defined benefit to defined contribution plans accelerating, the system should provide a natural platform for longevity solutions marketing, reaching prospects who are prime candidates for guaranteed lifetime income products.

The demand for longevity coverage is likely to soar given the demographic and macroeconomic trends, while the ability of annuity providers to capitalize on that should be enhanced by recent regulatory changes in creating FDI.

However carriers going after this market segment should carefully consider how they design, model and distribute such products to meet economic targets and reduce downside risk over the long term. They should also stay engaged with the customer to manage their expectations and product features as mortality trends play out, rather than just treat longevity policies as one time product sale and hope their assumptions turn out to be profitable.

Insurers could perhaps craft more hybrid products that account for wider variety of senior citizen needs, such as combining life insurance, retirement income and long term coverage in a single policy, while limiting the longevity exposure by capping life time income benefits. The development of such multipurpose policies should be driven by longevity trends that might make standalone life insurance policies less attractive if life span continues to steadily increase, as expected. Growth in digital channels requires insurers to embrace top to bottom transformation.

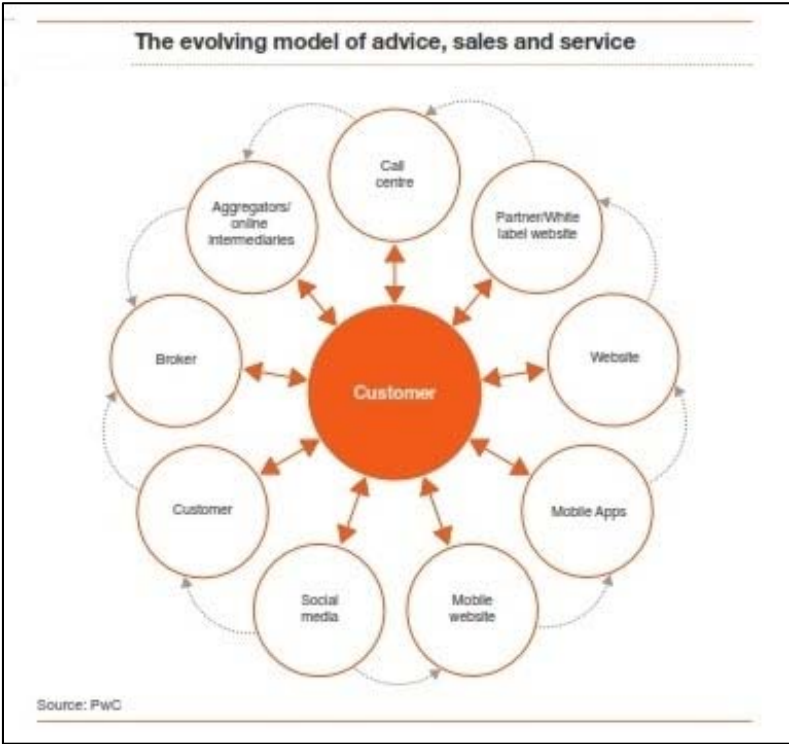
This looks to be an active year on the compliance front as insurers adapt to a host of regulatory changes.

For one, 2015 will see the first Own Risk and Solvency Assessment (ORSA) summary filing. ORSA reflects the new wave of insurance regulation, where static examinations conducted every five years are replaced by an ongoing dialogue between regulators and the regulated, engineered on a framework of real-time, in-depth, customized, relevant information. Increased consumer protection activity is likely to continue, as witnessed most recently in New York State's investigation into indexed universal life sales practices. This may affect insurers that need to adjust policy design, product mix, or processes in response to economic conditions and regulatory changes. Group supervision is likely to undergo further strengthening. Model acts covering corporate governance and holding company supervision will either be in the National Association of Insurance Commissioners (NAIC) approval process and/or put before state legislatures for adoption. Supervisory colleges — designed to facilitate oversight of internationally active insurance companies at the group level — will likely grow in importance; increasing demand on compliance staff. Perhaps nowhere will the challenge to L&A insurers be more evident than with capital standards. The regulatory structures at the federal level remain formative. Internationally, Solvency II-influenced regulation seems to have gained dominance. All this leads to greater opportunities for friction with state regulators, and a toughening regulatory climate that may manifest in greater restrictions on capital. The few carriers designated as global systemically important insurers will be the first directly affected by the upcoming wave of capital standards, with the Basic Capital Requirement (BCR) adopted by the International Association of Insurance Supervisors (IAIS) in October. The BCR will be reported on a confidential basis to group-wide supervisors and shared with the IAIS beginning in 2015. Also in 2015, work will likely accelerate on other capital standards, including those for internationally active insurance groups.

The NAIC, which is working with the FIO and the Federal Reserve to support a US standard, unveiled its own capital framework. Of the two options proposed, one is RBC-plus based, while the other uses an accounting agnostic cash-flow testing approach. The valuation method selected for capital standards could have significant repercussions for life insurers,

whose long-tail claims may not match up well with the volatility that could be introduced by market based valuation. One positive for insurers at year-end 2014 was the Congressional. This reduces capital concerns by allowing the Federal Reserve discretion in setting capital requirements for systemically important financial institutions that are also regulated by state insurance regulators. In addition, it prohibits the Federal Reserve from requiring insurers using only statutory accounting principles to use generally accepted accounting principles. Even purely within the United States, regulatory pressure driven in whole or in part by non-state actors will likely have an effect. Principle-based reserving (PBR) may be the NAIC's number one priority, but loud resistance by some influential state regulators, consumer advocates, and the FIO may slow its acceptance by state legislators, and thus defer any capital relief PBR might have been expected to provide. The regulation of life insurer-owned captives may also be expected to increase compliance and capital costs for carriers

that go that route. While the NAIC has adopted the framework suggested in the Rector Report on treatment of captive reinsurance transactions, New York remains firmly opposed. The FIO echoed New York's objection in its September 2014 annual report. In its November 2014 report to Congress on systemic risks, Treasury's Office of financial Research called "the migration of financial activities toward opaque and less resilient corners of the financial system" one of the most important, increasing risks to financial stability. The report cited this use of captives as one example "of migration and innovation that may require monitoring for their potential to pose financial stability risks". The captive issue may have tax implications as well. The IRS is examining whether there is actual risk transfer to affiliated captives, which is required to qualify for tax deductions, as well as the issue of possible excessive premiums being charged by such captives. The legislation is primarily aimed at affiliated reinsurers operating in jurisdictions such as Bermuda and the Cayman Islands.



**Fig 9:** The merging of various parameters to evolve a new model

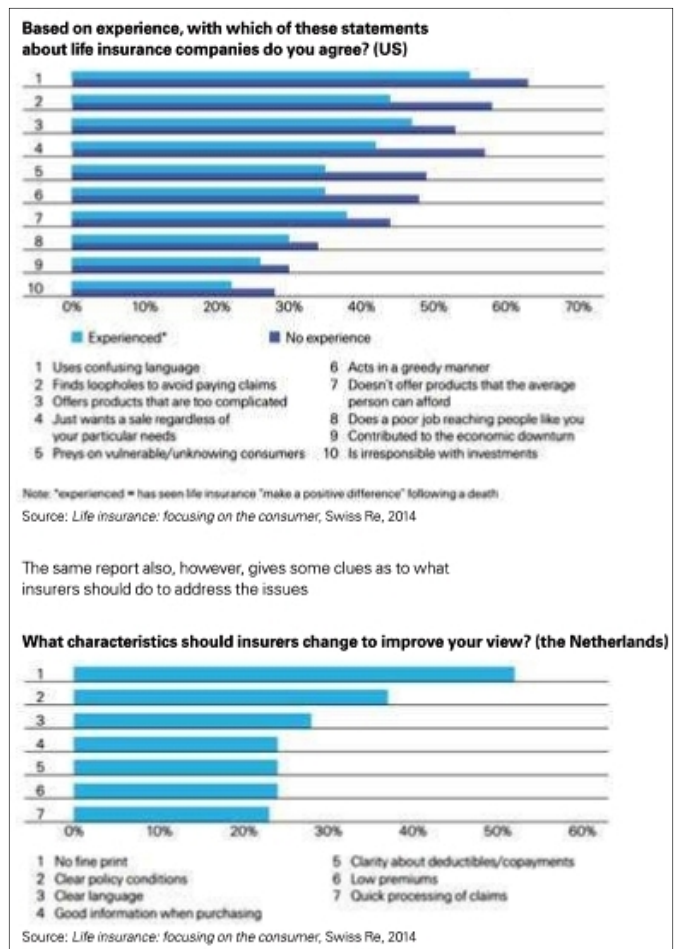
The pace of regulatory evolution is unlikely to slacken soon, so it may be time for insurers to consider the process of compliance transformation. This may include enterprise-wide aggregation of core regulatory change activities, the creation of a coordinated response for foreseeable regulations, and the utilization of scenario planning techniques for the unknowns, along with the formation of rapid response teams. Such a revision may help the ongoing process of planning for change and create differentiating value from mandatory regulatory exercises. In addition, we expect the bar to continue to be raised as state, federal, and international regulators battle for supremacy in terms of which standards and regimes must be followed. Even if certain companies aren't technically subject to new regulations at first, they may very well get swept up in having to meet these higher standards over time. In any case,

carriers should expect ongoing regulatory uncertainty as the various regulatory authorities jockey for position and debate who's set of rules the industry must ultimately follow. Upgrading capital management Insurers look to integrate internal, external capital frameworks for more effective decision-making. The challenge of satisfying the diverse interests of a wide variety of stakeholders, both internal and external, has often induced insurers to employ more than one approach to capital management — at times seeming to operate independently of one another — to cover the economic, accounting, and regulatory aspects of their businesses. In an effort to better assess the return potential offered by various businesses, many insurers have developed some form of internal framework based on the economic capital approach, defined by in-house assessments of the amount of capital

needed to sufficiently cover all major business risks. These range from primary factors, such as insurance, market, operational, and liquidity risks (which are more quantifiable and can be mitigated to a certain extent) and secondary factors, such as strategic, modeling, and reputational risks (which are less quantifiable and generally considered more difficult to mitigate) However, insurers have often tended to use internal capital frameworks on a limited basis, such as allocating capital notionally to business units for the purpose of performance benchmarks, rather than utilizing them for day-to-day operational decision-making, potentially causing disconnects with pricing and risk management functions and limiting their efficacy. In addition to managing capital utilization internally, insurers also have to be constantly cognizant of external capital frameworks mandated by regulators and those advocated by rating agencies. Regulators have imposed a variety of statutory capital requirements on carriers designed to protect consumer interests under different scenarios. Likewise, rating agencies as well as analysts tracking listed insurance companies use proprietary capital models to evaluate an insurer's financial strength and stability, along with its preparedness to withstand varied stress situations. Several regulatory enhancements — including the NAIC's Own Risk and Solvency Assessment, the federal systemically important financial institution designation, state enterprise risk management standards, and continuing influence from international developments such as Solvency II and IAIS's global capital standards — are pushing carriers to embrace a more rigorous and holistic process. This includes the formal approval of annual capital sources, stress testing, formalizing risk appetite and risk tolerance statements, as well as robust reporting tied to risk-adjusted capital. Rating agency capital frameworks have also undergone changes, with an increasing trend of agencies viewing capital on a “look-through” basis that does not give as much credit for on- or off-shore captive/reinsurance solutions or structures in their assessment of capital adequacy. Such changes in external capital standards are prompting insurers to embrace processes that enhance collaboration among capital management and associated functions, while also pushing them to reassess the way they incorporate external frameworks in their operations. As investment yields continue to languish in this low interest rate environment, L&A insurers have had to review the return potential and pricing of most of their products, especially for those that are more capital-intensive (such as annuities), underscoring the need for carriers to re-examine their capital management approach. Finally, advancements in technology — ranging from analytics to modeling to information management — have made projection of capital requirements and understanding of the intersection of different capital frameworks more manageable and efficient. These converging factors spotlight the need for a more robust internal risk-adjusted capital framework that incorporates different approaches, including economic, accounting, and regulatory capital management, while at the same time providing clarity to other functions within the company on how capital is deployed and measured.

A growing number of insurers will likely look to follow the lead of other institutions in the financial services industry, such as banks, by implementing an internal risk-adjusted capital adequacy framework that accounts for economic as well as regulatory factors under one integrated capital management system. Having a combined view of capital should enable

insurers to conduct a thorough bottom-up analysis of their risks by product line and risk type, and apply the approach that is most meaningful for mitigating the particular exposures to each, leading to more transparency and consistency in pricing and underwriting. At the same time, an integrated framework allows those in capital management — both directly and indirectly through related functions such as pricing and asset liability management (ALM) — to better collaborate with other core functions including actuarial, corporate planning, and investment management, with a clearer appreciation of the impact their individual strategies might have on one another. Such a strategy should also help insurers to better understand the capital consumed by different business units, including core insurance and annuity products, asset management, retirement products, and any affiliate banking operations. This would enhance the return on risk-adjusted capital assessment by insurers, allowing them to more effectively differentiate between businesses that generate high levels of absolute profits but consume more than a commensurate capital requirement and those that seemingly deliver low gross profits but can provide higher risk-adjusted returns.



**Fig 10:** The attitude of customers towards a host of questions

The strengthening of such capabilities should help carriers better assess the effect of product design as well as pricing on enterprise risks and the capital required to back them under different scenarios. This should also facilitate the engineering of products that are better aligned with the strategy that articulates how the firm balances policyholders' capital needs

with return on equity targets. In addition, companies that are looking to commit capital to large initiatives such as mergers and acquisitions, technology investments, distributions deals, product or geographic expansion, or similar significant moves should be able to make more informed decisions based on this approach. Implementing an integrated capital framework would require a multipronged effort, including improved information management and advanced analytics, more holistic capital management processes, and a governance mechanism that enables a more granular, real-time assessment of capital deployed. Carriers should also take a fresh look at how to better integrate capital and risk management with their particular operating model and strategic decision-making process. Driven by regulatory pressures, institutions in the banking sector are ahead of many insurers in terms of creating sophisticated capital models that allow them to analyze risk-adjusted returns at a granular level and effectively utilize such data in making operational and strategic decisions. But many insurers are looking to catch up by adopting a similarly holistic approach to capital management. Insurers that invest in a more integrated internal capital framework, in conjunction with an enabling mechanism that effectively integrates people, process, technology, and governance, can expect greater clarity for internal as well as external stakeholders. Internally, product development, treasury, investments, ALM, and other related functions can operate more effectively with a clearer articulation of how capital is viewed and optimized. Externally, the differences among various accounting and capital bases can be more effectively explained, with the firm's view and objectives — rather than external benchmarks — driving stakeholder communications. Such an integrated capital management framework could form a strong base for meeting the increasing demands of a variety of stakeholders for more robust stress testing and scenario planning, while facilitating more accurate long-term executive decisions and enhancing product pricing, reinsurance strategies, and other day-to-day operational business decisions. Insurers look to integrate internal, external capital frameworks for more effective decision-making, regulatory framework enhancements, an integrated capital management framework, stricter rating agency capital models, more predictive internal economic capital models, a risk-adjusted capital adequacy framework capable of responding to the capital management requirements of varied external and internal stakeholders. An integrated risk-adjusted capital adequacy framework may allow carriers to conduct a thorough bottom-up analysis of their risks by product line and risk type, enhance transparency and consistency in pricing and underwriting, meet the demands for more robust stress testing and scenario planning and clearly articulate how capital is viewed and optimized, enabling better collaboration between various functions. The pillars we've covered in this outlook are often tackled by insurers in isolation — the result of a silo mentality all too prevalent in the industry that has hindered operating efficiency and hampered growth potential. In fact, these pillars are interconnected and should be addressed as part of a multipronged effort to reshape an insurer's business model to remain competitive and stay ahead of the curve in a rapidly evolving market.

While the exact methods of adaptation are subject to debate, what's clear is that the world is changing in ways that require a different focus from the industry, emphasizing products and services that are more flexible, easily customized, and

consumer-driven to satisfy a widening range of needs and expectations. In essence everything I have discussed revolves around enhancing existing capabilities and adding new ones to drive healthy, sustainable growth, while producing more satisfactory returns for shareholders at publicly held carriers and better dividends for mutual policy owners

Though agents have long been the primary force in the servicing and distribution of insurance policies and claims, online channels have started making a lasting impression in the industry. Once an ancillary channel, the internet-PC is now ranked higher in importance by customers than a number of traditional channels. Insurers themselves are recognizing the wave of the future, reporting that within five years they expect nearly one third of their business to occur over digital channels. In taking measure of the industry's current client facing digital capabilities, we found North American insurer's exhibit the highest levels of online maturity, followed by those in Asia-Pacific and then Europe. Non-life insurers are more digitally advanced than their life counterparts, exhibiting leading practice or advanced functionality throughout various touch points of the customer life cycle. Life insurers in contrast tend to offer only basic and intermediate online features. Across the various stages of customer life cycle, we found insurers globally are most adept at providing a rich digital experience when customers are researching policies and getting quotes. This expertise dovetails nicely with the high level of importance customers place on this functionality. Capabilities lack however in online claims servicing, pointing to an area where insurers need to devote more attention to meet evolving customer expectations. Competing effectively in the future will demand an intense focus on improving digital connections with customers. Only by embracing digital channels will insurers be able to boost their top line growth. At the same time, strategic investments in key operational areas will be crucial to driving higher profitability. Insurers that fail to initiate a top-to-bottom transformation of their digital capabilities, risk falling behind their pro active competitors. Internet emerges as more important than most traditional channels.

In a relatively short time, the internet has had tremendous impact on the way customers research, purchase and monitor their insurance products. Insurance Voice of the Customer Survey found that customers view with the ability to connect to insurers via personal computers linked to the internet as more important than gaining access through a variety of other traditional channels, including brokers, banks or the telephone. In many ways insurance is a natural fit for the internet. An insurance purchase demands deep understanding of the different types of products available, how they are priced and how they compare. The internet in turn remains an unparalleled medium for providing access to information. Virtually every major insurance provider around the globe offer detailed description of their products as well as the ability to price policies via the internet, and third party sites are often available to do comparison-shopping. Using the internet consumers can conduct their insurance research at their own pace and convenience, and from whichever locations they choose.

The advantages of the internet in insurance are not limited to research and information gathering. Many insurers offer this ability to purchase policies via the web, as well as accomplish various service related tasks. In addition to paying premiums and deductibles electronically, customers are often able to perform tasks online such as making address changes, viewing

the status of applications and checking on the progress of claims. Across all of these dimensions researching and getting quotes; buying policies; and performing service tasks related to policies and claims-the internet is viewed as the most important medium.

Dealing with the steep dynamics calls for a major rethink of strategic assumptions, routes to market and organizational models, with the ability to look outside in on your business at the core. Consumers have become accustomed to the ease, intuition and elegance of digital retail interaction and want the same experience from your business. As smart phones, I pads, Tablets and other such versatile mobile devices proliferate, they also want to be able to conduct business when they want, where they want and on the channel of their choice. Customers want greater transparency (allowing them to compare products), flexibility (products that adapt to their changing needs) and control (the comfort of being able to change their mind if not satisfied).

Regulatory insistence on greater transparency will make it easier to compare prices and value. Developments such as the caps on fees in India and the planned diminution of commissions for advisors in the UK are going to bring changes and the value policy holders receive in return. The emergence of virtual networks, multichannel interactions and direct to consumer life insurance is fragmenting the value chains.

### Information advantage through 'Big Data'

Increased processing power and smarter analytics will pave the way for more informed prevention, risk selection and premium pricing, allowing insurance business to offer cheaper and more personalized products, while still sustaining margins. Advances in analytics are already allowing life and pension business to develop a better understanding of their risks and price more keenly. But we have been only scratching the surface until now. The most important differentiator is going to be how to extract customer profiling data from all the purchasing, social media and other digital trails people leave. A lot of this information is unstructured and new techniques are emerging to analyze this 'Big Data'. For example transactional data is being used to find out where and what customers buy to determine "well being" scores, which can then be used to identify whether they are a good risk. Big Data refers to the phenomenal amount of structured, semi-structured and unstructured internal and external organizational data that is exchanged every day, but most of which goes unused. Analysis of those rich sources of data would allow us to develop a clear and comprehensive profile of the health, wealth and behaviour of the customer before he or she applies, saving all the form filling and verification needed. This would in turn allow us to target particular customers and offer instant online cover.

### Proactive cover cuts rises

Next up in the big data revolution are sensors. Sensor technology is already coming into play in the motor cover allowing insurers to judge how carefully the policyholder drives and reflect this in their pricing. In turn, safer drivers benefit from lower premiums. Importantly, these devices have lowered accident rates by helping to encourage more careful driving.

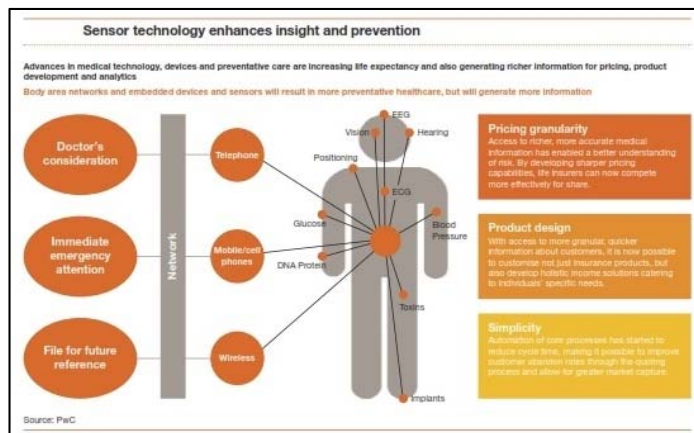


Fig 11: The use of sensor technology in health insurance

### Big Data consists of

1. Multimedia
  2. Business Intelligence
  3. Operational data
  4. News and markets
  5. Text
  6. Social Media
  7. Everyday communication
- Multimedia are those conversations and images that improve customer experience through captured attitudes and beliefs. Operational data are those data which are captured through business operations waiting to be enhanced with unstructured data from the outside world. News and markets provide the economic trends and global events that impact investments and buying habits. Text untapped business knowledge hidden in documents and emails. Social media are those data emerging from sentiments, relationships and preferences that consumers broadcast daily. Everyday communication is the pattern generated by phones appliances and other devices that can provide insight into events and habits.

79% of life and pension executives believe that privacy concerns and costs of sensor technology would be overcome and we would begin to see increased adoption of medical devices over the decade.

As any insurance market matures, gradually its policies move from endowment and participating policy to group pension to limited life to universal life to individual annuity and individual pension. The insurance industry has a rich history of adopting and innovating through information technology. It was among the first to widely use computers and fully digital data and do current management processes. The industry has also been at the forefront of employing cutting edge financial and risk modeling technology and implementing state of the art enterprise systems. However life insurers have lagged behind their financial counterparts in the use of internet and social media to market directly to customers.

Primarily, insurers' social media efforts promote their brand and products to consumers while recruiting partner and sales agent. According to a recent LIMRA study, 60% of insurers are maintaining or developing mobile initiatives, primarily to support prospecting and sales functions. Internal interviews with top life insurance executives corroborate these findings.

As life insurers struggle with low interest rates in the current economy, emerging technologies offer a cost effective method of reaching consumers. LIMRA anticipates insurer's future focus will be mostly on creating mobile platforms offering a cheaper and more encompassing interaction channel. Life insurers are also leveraging these new channels to educate consumers on the need for life insurance and product offerings available to do so. Farmers Insurance demonstrated this in 2010 when they partnered with the makers of Farm Ville, a virtual farm simulation game, to create a blimp that floated across users virtual crops to promote their crop protection products.

Maintaining and monitoring social media also provides a conduit for gauging insurance consumer's perceptions and real time reactions to ad campaigns, various issues and products. Through the interactivity unique to social media, insurers can respond to questions, concerns and complaints-strengthening customer relationships.

Given these benefits its not surprising Insurance Networking News estimates an average of 13-15 twitter accounts are maintained by large insurers. Insurers also use social media sites for forensic data mining to uncover fraud. Such use would include verifying a disability claim by reviewing a Facebook account for comments or photographic postings that would indicate a false statement of health. Despite these examples of adoption, the actual sale of an insurance policy still takes place primarily by phone or in person through an intermediary. Web and social technology serves mainly to facilitate sales-providing consumers with access to more information regarding price and product benefits. Online quote engines generate 'bill park' quotes for a narrow set of homogeneous insurance products after collecting contact and basic demographic information from a prospective buyer. This information (or lead) is transferred to subscribing agents or companies who then engage in the actual sale. Insurers desire to avoid eroding agents' sales of higher -profit products remains a major barrier to online direct sales. Furthermore, pricing pressures keep insurers from fully underwriting through electronic means, leaving relatively expensive, small face-value term life products as their primary online offer. As a somewhat surprising result, internet sales initially led to higher prices for life insurance products sold online. The reduced search efforts and ease of internet purchases proved valuable enough for buyers to pay a marginally higher price. Only after this temporary inflation attracted competition did the cost of online life products experience a reduction in price of upto 15%; as per a book called, 'Barriers to Insurance' use of the internet for Product Distribution. Producers predominantly use social media sites as a means to connect with current and prospective customers. They also use it to network with other insurance professionals. Producers traditionally network within the limitations of their geographical locations. However social media expands these geographical boundaries, facilitating customer relationships and potential leads to a far greater extent. Understanding the importance of social media, many producers have established social sites, but lack the expertise to actively engage with customers. Those companies recognizing social media as perhaps most suited to producer level actively train producers on how to use social media sites, ensure they operate within legal and company policy guidelines.

## Consumers' use of Emerging Technology

### An example:

**LifeEngage:** The Life Insurance Platform for the Modern Insurance Company. A unified Life Insurance point-of-sale and underwriting platform for partners, producers and customers, helps engage with customers with an efficient, modern and seamless sales experience. Digital forces are disrupting the life insurance market, creating new customer expectations, convenience, information and interactions with agents. Insurers that can marry a high-touch approach with cutting-edge technology stand to win. Cognizant's LifeEngage is answer to your following questions

LifeEngage blends rich functional and technical features, helping you address the distribution needs of today and tomorrow on a single unified platform. Even more, it's built for both online and mobile channels, tailoring it for the experience that today's consumers expect."

### Life Engage Product Features

Multi-channel and multi-platform Industry aligned business and data mode high configurability, Offline-Online sync, Exhaustive Functional Coverage System, Integration options, Social Media Integration, Usage Tracking and Integrated Customer Analytics, Gamifying Adoption, Over the Air Updates, Accelerated Product Set up Integrated Rule and Calculation engines Collaboration Enabled

Designed with a 'mobile-fist' approach, all functionalities are 'mobile ready' while being available on desktops as well, providing your agents and customers a consistent experience both online and offline. LifeEngage also comes in with built in social media integration and collaboration features. The platform readily leverages analytics to facilitate consultative selling and need based product recommendations. Its state of the art new business capabilities will help your business users configure the end to end new business components starting from product definition, rates, calculations, rules and application templates with minimal or no IT intervention, drastically reducing time to market for new products.

"In short, LifeEngage is built for business—it improves sales, gets your products to market faster, increases agent effectiveness, reduces customer acquisition costs, and delivers on the experience and interaction customers expect." It has been found that upto 30% improvement in cross-sell/up-sell upto 20% reduction in free-look cancellations after using LifeEngage

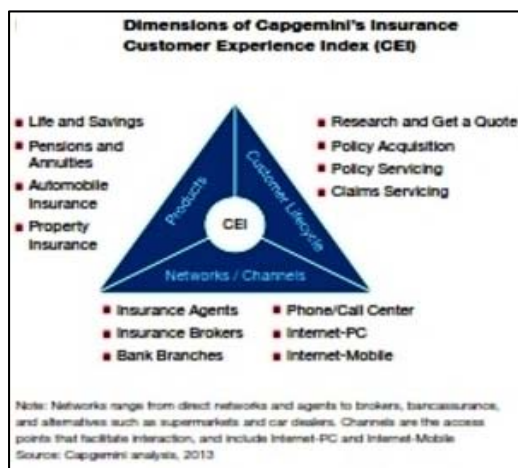


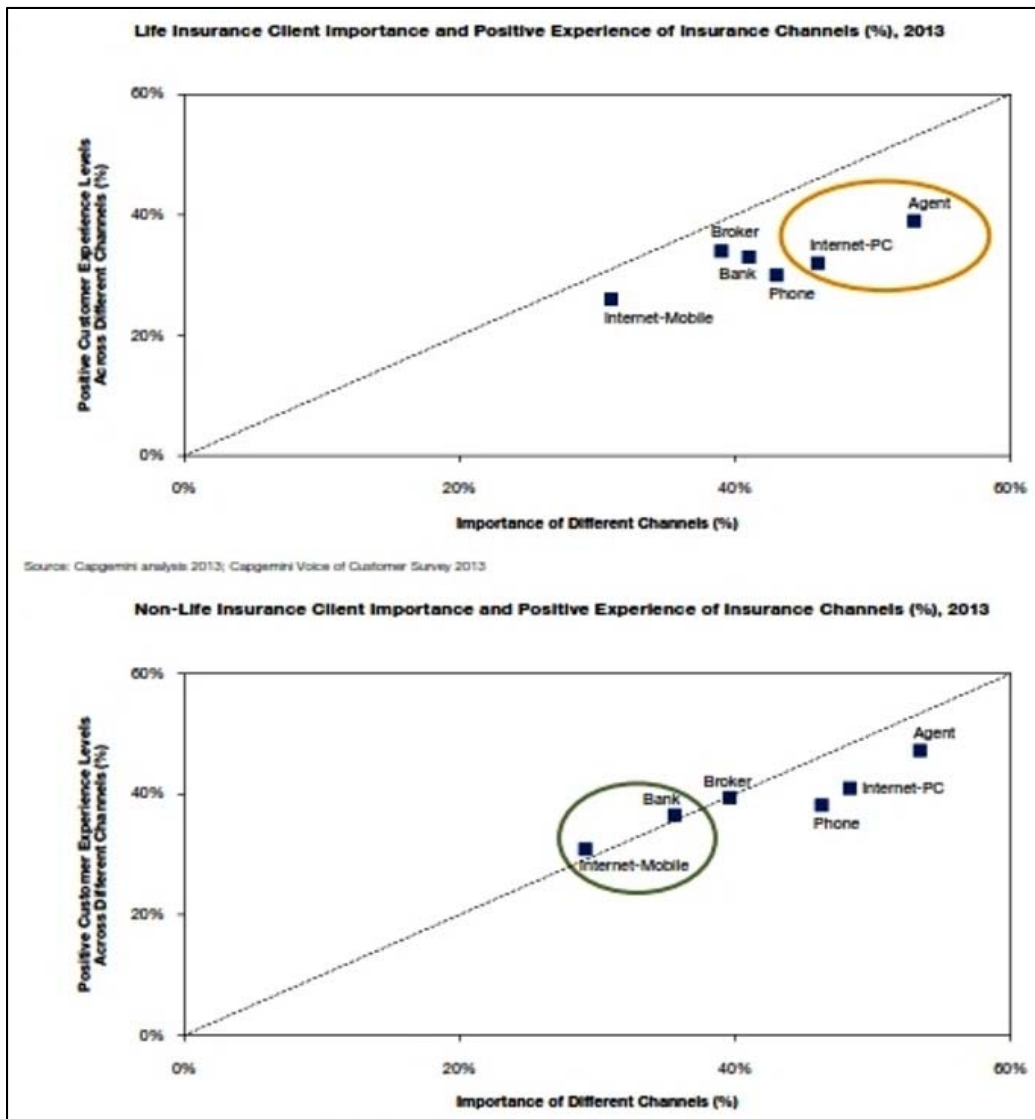
Fig 12: The triangle of Customer Experience Index

Emerging mobile platforms, such as smart phones and tablets, are accelerating the impact the internet has on society. Since 2008, mobile internet access has seen user adoption rates roughly three times faster than the internet's adoption on desktop computers. By 2015 more than 200 million smartphone subscribers began surfing the web using mobile phones and tablets accounting for 200% of all internet activity. Previously internet usage was limited to users of desktop computers. Now, new consumers enjoy internet access through mobile devices. According to web-watchers and marketers, nearly one third of mobile users identified their phone or tablet as their primary or exclusive method of accessing the internet. Mobile technology is enabling internet access on a larger scale to many previously underserved demographics. To the extent the internet can be found to have an impact on the insurance market. However, it is important to note that mobile use is particularly popular with the younger age demographics, which is less likely to be in the life insurance market. Where mobile goes social media quickly follows. Roughly two-thirds of online adults use social media platforms such as Facebook, Twitter, YouTube, LinkedIn and Wikipedia. These platforms provide content well suited to smaller mobile screens. This creates small easy to process messages, users can immediately

respond to and distribute to large audiences. Social media users organize themselves into affinity groups, focused often microscopically around preferences, interests, professions, relationships or demographics. Social media sites sell customized advertising, targeting these affinity groups while collecting and measuring a large amount of information in order to gauge their efforts.

**Innovating with new models**

In times where it is important to conserve capital and allocate capital to resources that will deliver sustainable returns, no insurer can remain rigid in their distribution or operating model. Changing life styles and buying preferences will constantly dictate the future models of distribution. However the life insurers would also need to decide on the resources that need to be deployed to build these future models. While the urban market today might be comfortable buying online insurance products, they might not resist the warm smile of a life insurance agent. There are also successful models in other financial and non financial services and business that can be adopted to distribute life insurance products. It would be useful to examine some of them from an 'ideating' perspective.



**Fig13:** The growing importance of digital channels

### Peer to Peer Insurance or Social Insurance

This draws its influence from P2P lending which is the practice of lending money to unrelated individuals or 'Peers' without going through the traditional financial intermediary such as bank or other traditional financial institution. The lending takes place online on peer to peer lending companies' websites using various lending platforms and credit checking tools. Many such platforms exist today in the United Kingdom and United States with the first one in India being the Bangalore based Dhana-X. In the UK the first and the most successful P2P lender is Zopa which was founded in 2005 and has issued loans in the amount of GBP 278 million with over 500,000 customers. There are now P2P lenders that are even using provisions funds to safeguard lenders against borrower default. Following the success of these P2P lenders, this idea is currently being extended to insurance in Germany as insurance is essentially allowing individuals to develop their own risk pool. The service is a combination of a peer risk pool and a traditional insurance policy. Users of the service invite their friends to cover a small portion of any claims that are made and the rest of the claims are paid by a conventional insurance policy. This service as claimed by the company prevents insurance frauds and misconduct via means of a social control and reduce sales cost discourages small claims and cuts administrative overheads.

### Direct Delivery Model

This is inspired by the Amway success of multilevel marketing. The direct to customer approach means that the life insurance companies have to focus on four key levers.

1. Customer segmentation and analytics for targeted approach to marketing.
2. Multichannel strategy that creates value for the direct customer.
3. Product offerings need to be simple and easy to understand, most importantly easy to explain.
4. After sales support that should be technology driven in order to remain cost effective.

Customer data analytics based marketing strategy relies not on experience or 'gut-feel' but on an understanding of customer preferences and price sensitivity. This enables insurers to interact with customers to maximize the retention (improvement in persistency ratios) and also identify cross-sell opportunities. These interactions also provide a degree of comfort to the customers and builds confidence in the insurer and their own purchase decisions. Further, the acquisition cost should be kept variable as far as possible to make the model a success.

### Mobile based insurance model

Through social media, consumers have great influence over others' perceptions of life insurance products, companies and producers. This shift in power toward consumers alters the way in which life insurers and producers approach marketing, customer service and distribution. As today's young mobile-users age into life insurance markets, pressure on the insurance industry to reach them through mobile/social media platforms will increase exponentially. Market/ Technology trends during the 1920s and '30s, insurance firms pioneered the use of tabulating machines, as users of the punch card technology found innovative ways to improve their use in the administration of day-to-day tasks. The machines themselves had been used since the 1890s. As technology matures and works its way into the hands and lives of new generations and individuals, the opportunities for innovation increase exponentially. The hurdles limiting new media's role in the execution of life insurance sales are known insurers still depend heavily on person-to-person medical interviews, examinations and laboratories to fully underwrite life products. In addition, product sales are still executed primarily through referral networks and personal relationships.

Life insurance underwriters are gaining access to huge new caches of data and predictive modeling tools to leverage it as never before. "Facebook Stores up to 800 Pages of Personal Data per User Account,"

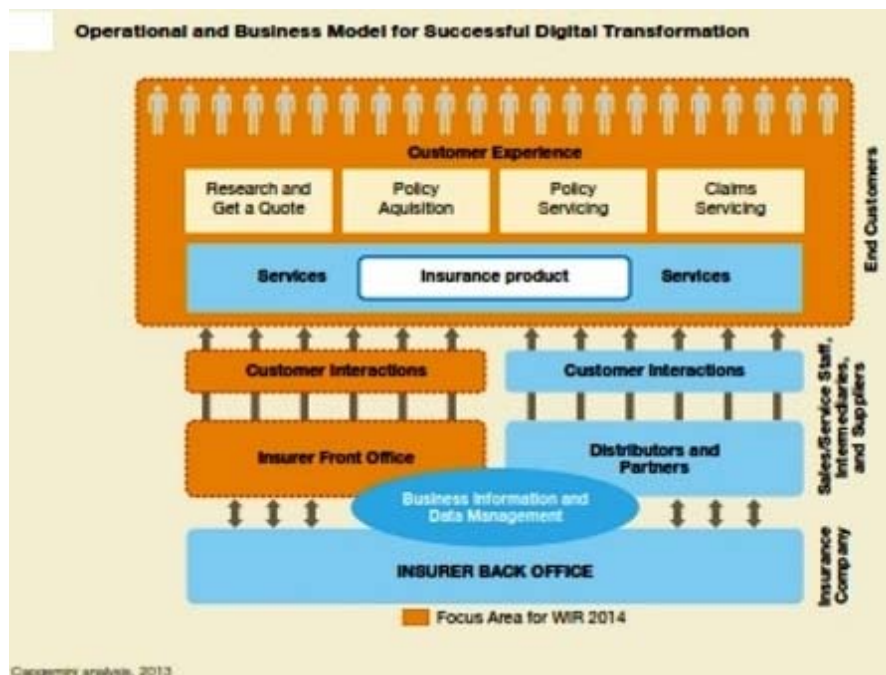


Fig 14: The operational and business model for a digital transformation

ExamOne’s Risk IQ platform ranks a life insurance applicant’s risk of mortality using 140 different laboratories, paramedical and demographic variables. The process boasts shorter underwriting cycles, improved risk calculation and a reduced dependence on traditional medical analysis.

To collect the information, the labs themselves use a smaller infrastructure located closer to consumers in retail stores and pharmacies. Trends indicate marketers and producers will increase their dependence on social media’s built in communities, psychographic measures and feedback tools to match their brands, products and messages to audiences with ever-increasing precision.

Companies will leverage online and mobile tools to recruit, educate and motivate agents and personnel. Internet and mobile technology can be used by insurers to extend their loyalty marketing operations, using wellness tools and information to improve in-force mortality and persistence.

In addition, as buyers make more complex purchases on their mobile devices and companies can assess risks through indirect means, a greater variety of life insurance products could become available for direct purchase online. Companies may find a tremendous number of buyers beyond the reach of traditional sales. To this point, many life insurance executives indicated during personal interviews that they may begin offering certain products online only and not through the traditional distribution sources.

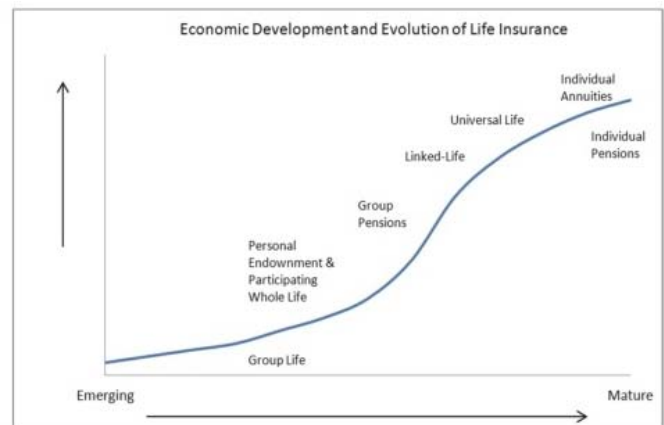
At least since the late 1990s, many experts have predicted growth in online insurance sales. As the Internet boomed, other financial services, most notably retail banking and investing, demonstrated how online applications could change traditional channels of distribution.

However, the predicted growth in insurance sales has not taken place, perhaps especially in life insurance. Experts have offered varying explanations for the limited growth of online life insurance sales. Some see efforts to sell insurance online as designed to cut agents out of their customer relationship or disintermediation and thus have resisted efforts to move sales online. Many have noted relative to the overall financial services industry, the insurance industry has been slow to build a Web presence truly functional. Providing self-service tools which allow the insurance market place by gaining licenses to offer insurance products through their existing online infrastructure. The Impact of Technology on the Life Insurance Industry forced consumer to assume greater control of researching, buying and managing their life insurance may be something consumers expect based on other Internet experiences. However, until relatively recently, it is not something most life insurance websites provided. In fact, studies by the Customer Respect Group in 2005 and 2006 rated the life insurance industry websites as a whole considerably worse than the cross-industry group of life, health and property/casualty insurers. A Booz-Allen (2001) study reported that insurance companies attracted far fewer visitors to their websites than other financial institutions, and consumers spent less time on insurance industry sites once they were there. Websites have improved somewhat in the intervening years. In 2010, the Customer Respect Group noted a “significant” investment as “websites migrate from information repositories to be an integral part of the customer experience.” Nearly two-thirds of major insurers provided an online tool to help calculate the amount of term life insurance needed. However, as the report noted, this type of online tool

does not have much influence on the distribution model. Only one in four sites provide a tool to help consumers choose between term and whole life, a role typically associated with insurance agents.

According to Comscore, aggregator websites (which pull together information from various websites) provided 78 percent of online life insurance quotes in 2010. Most, if not all, aggregator sites focus on term rather than whole life insurance sales. In 2011, the Customer Respect Group reported nearly 90 percent of life insurance quotes started on aggregator sites. Consumer advocates have challenged the quality of information available from these sites. Two studies (Hunter and Hunt, 2001; Mayer, Huh, and Cude, 2005) have reported these sites are not always successful in identifying the lowest-priced policies, which consumers would presume to be the function of the site. As a group, the sites were biased in favor of policies carrying commissions. In addition, sites claiming to provide instant quotes often were lead generators for insurance companies and intermediaries. After providing personal information, consumers received a follow-up phone call or email rather than a quote.

Another set of explanations for the limited growth of online life insurance sales focuses on the consumer. Some doubt whether consumers really want to buy any type of insurance online. Clemons and Hitt (2000) wrote, “Insurance is an event driven product (buy a car or house, change jobs, get married and so forth) and the vast majority of customers renew their policies with a reconsideration of the product, company, or agency. Even for the short-term products such as term life, at most 1/12 of the policies are up for renewal in any given year, and only a small fraction of these are actually ‘in play’”.



**Fig 15:** The evolution of life insurance policies

Support for this argument comes from Deloitte’s (2012) “The Voice of the Life Insurance Consumer” study. As per this study, 62 percent of non-buyers had not received an unsolicited offer to buy life insurance in the past year compared to 44 percent of buyers.

Another consumer-focused argument is consumers may not want to serve as their own insurance agent. They may not trust themselves to make the best choice, especially if they realize price is not necessarily a key indicator of quality for insurance products. The Customer Respect Group quoted Beth Hirschhorn, senior vice president and chief marketing officer for MetLife, as saying, “Of those people who say they will buy life insurance, research shows more than 80 percent fail in their attempt.”

A third explanation for why consumers may be leery of online life insurance sales is the amount of personally identifying and sensitive information needed to provide an accurate quote. Consumers may be reluctant to provide this type of information online and to an entity with which they have no previous relationship. Yet if they provide some, but not enough information, they still have sacrificed personal privacy without the reward of an accurate quote. In addition, even if they provide the requested information, consumers may be required to submit to a blood test and/or in-person health screening. If so, buying life insurance online no longer seems more convenient than buying through an agent. Deloitte (Fairley, 2012) reported about 26 percent of the respondents in their study found the application and underwriting process to buy life insurance to be too difficult.

There is clear evidence consumers do value online availability of information about life insurance. Deloitte (Fairley, 2012) reported 32 percent of current buyers and 27 percent of non buyers in their study searched online for information about life insurance and another 21 percent of buyers and 16 percent of non-buyers had searched specific insurance company websites. However, in a 2002 study (Goch, 2002), the Independent Insurance Agents of America found “many respondents do not perceive cost savings from buying insurance through the Internet.”

If this dichotomy is still true today, it explains the “shop, not buy” mentality of consumers toward life insurance sales.

LIMRA’s 2011 Insurance Barometer Study suggests online insurance consumers are not monolithic. Younger adults (aged 25 to 44) are more likely to buy life insurance online than older adults, and males are more likely than females. Similarly, those with higher incomes (\$100,000 or greater in household income) are more receptive to online insurance purchases. Among the three groups examined, Hispanics were more likely than African Americans or Caucasians to prefer to buy life insurance online. Twenty percent of the respondents said they would not use the Internet at all to buy life insurance online. Additionally, 43 percent of those aged 65 and older were unwilling to buy life insurance online.

The only empirical evidence on this topic, a study by Brown and Goolsbee (2002) more than 10 years ago, found term life insurance costs were lower in households with higher Internet use. While the authors attributed this difference to online insurance sales, it seems just as likely it describes consumers who are more efficient and/or effective at product search in general.

The impact of mobile communications and social media on the way insurers, consumers and regulators interact, communicate and do business will forever alter the fabric of our business culture. These emerging technologies are creating new marketing, distribution and customer service channels, requiring insurers to develop new business models and distribution strategies. They are also raising compliance, privacy and security issues that need to be addressed by insurers and regulators alike.

Despite all the advantages to emerging technology, many companies and producers still do not engage, or fully engage, in its usage. This is due, in part, to the ambiguous guidance on the proper use of emerging technology in current legislation and regulation.

Many compliance officers would like to use social media, but need additional guidance to proceed with confidence. There are

numerous concerns, but most involve the appropriate use of statistical data, liability of improper use from associated entities, product suitability and endorsement restrictions, and proper handling of negative feedback.

Through posts on social sites, insurance consumers can share their positive and negative feedback. However, social media and the Internet can magnify negative reviews, reaching more people in a faster way than word-of-mouth. Companies seek guidance on the proper treatment of this feedback, particularly when it comes to complaints. Compliance officers want to know, “Can I remove negative posts from my social site?” It should be noted, in the absence of clear guidelines, most companies are choosing to not remove complaints or negative feedback on their social sites.

Insurers also seek clearly defined rules for solicitation through social media and clarity on what constitutes a third-party endorsement. For instance, is “liking” a company, producer or product considered an endorsement? Liability for producers’ use of social media is another concern. Companies understand, in most cases, they are liable for their own employees’ or captive agents’ use of social media. However, liability concerning the actions of independent agents is more ambiguous. Lastly, insurers have raised suitability concerns.

Insurers are required to National Association of Insurance Commissioners. (December 20, 2011). The Use of Social Media in Insurance provides sufficient information and disclosures regarding their products and marketing statistics. This can be difficult to do within the size limitations and new framework characteristics of emerging technologies. For instance, Twitter allows only 140 characters, making it difficult for insurers to provide sufficient product disclaimers to ensure they have accurately represented the product. Additionally, the smaller screen sizes of mobile phones limit insurers to presenting only select information. Insurers are required to use new technology platforms and refine their ability to identify key information in order to adapt.

State insurance regulators use emerging technologies primarily to communicate to insurers and consumers. Through state-sponsored social media sites, insurers post information and bulletins to educate and inform consumers about insurance products, market issues and consumer risks.

The combination of social sites and mobile devices can be a particularly useful tool during a catastrophe, when obtaining the information necessary to file insurance claims is only accessible through a mobile phone chargeable by a car.

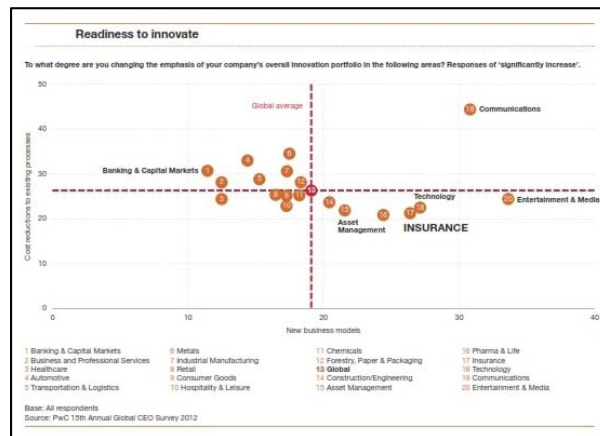


Fig 16: Life insurance industry vis a vis other industries in their readiness to innovate

Regulators are also beginning to use apps (computer applications) to assist consumers with insurance-related needs. Several states currently monitor market practices and compliance issues involving emerging technologies, particularly social media sites, through their market conduct exams or complaint process. Regulators are also beginning to track consumer complaints on regulatory-sponsored social media sites. However, most states do not allow employees to access social media sites while at work. These restrictions curtail the ability of regulators to actively monitor the activities of insurer and producer social media sites during office hours. This presents a formidable barrier to address complaints. If state insurance regulators are to provide effective oversight, they will need to bridge this gap by establishing appropriate Internet usage policies and security clearance to those with surveillance functions.

In general, state insurance regulators have a greater concern with the actions of agents, employees, smaller insurers and unknown participants than they do most insurers.

This is because insurers have a greater understanding of the existing laws and regulations applicable to the use of emerging technology. In contrast, many other stakeholders remain unaware of the legal risks involved, potentially placing them in unknown danger. Additionally, many companies never review their employees' or agents' (particularly independent agents') materials before they are posted online, compounding the legal risks involved. In examining this issue, regulators have sited such cases as local agents posting YouTube videos that cite non-sourced statistics, which violates many advertising laws.

Most current statutes and laws related to advertising, marketing, record retention, consumer privacy and consumer complaints provide broad guidance on the use of emerging technologies. These laws specify insurers and producers must adhere to the same standard of conduct when communicating through emerging technologies as they do with traditional communication mediums. Accordingly, all solicitations, regardless of medium, must comply with the licensing requirements of a particular state.

This may apply to insurers and producers whose solicitations through social media naturally cross state borders. Likewise, communication through emerging technologies must be accurately portrayed, with all statistical data relevant, and all product recommendations in compliance with existing state laws and regulations. Although existing legislation does provide a framework, many regulators also acknowledge the specific nuances between emerging technologies and other more traditional distribution channels warrant clearer guidance within existing legislation and model laws, such as the NAIC Unfair Trade Practices Act : In this regard, some states, such as New York, have issued specific guidance to insurers, making it clear the promotion of insurance-related activities through social networking sites “constitutes an advertisement, announcement or statement under New York Law.” The treatment of static and interactive content used on social media sites is one area of concern for regulators. Static content, such as profile data, is more akin to traditional content types such as print media and commercials. As such, its legal treatment is the same as other traditional static advertising content. In contrast, interactive content is unique to social media, allowing for sharing of information through the posting of links and comments from customers or non-associated parties.

Considerable ambiguity exists regarding insurer/producer liability from third-party content. Clearly, insurers/producers are not responsible for third-party content in which they had no involvement. But what if the insurer/producer was involved in the posting of third-party content? Different theories provide different solutions. Under the entanglement theory, liability would fall to the insurers/producers. Under the adoption theory, insurers/producers only become liable when the third-party's content provides for an implicit or explicit endorsement. The issue of third-party content needs to be clearly defined within existing legislation and model laws.

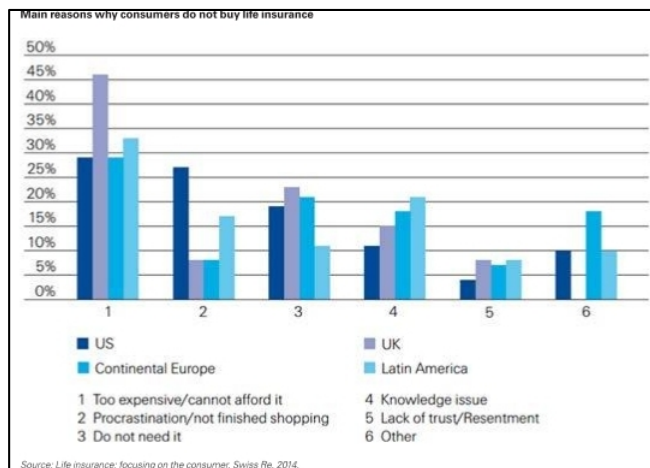


Fig 17: Graphical representation of the reasons for not purchasing life insurance

The applicability of record-retention expectations within emerging technologies is another area of concern for regulators. Insurers and producers are required to adhere to the record-retention regulations of their states. However, the volume and complexity of communications through emerging technologies challenges retention systems.

For instance, what is the expectation for insurers and producers to capture communication during chat sessions, or through posts on social sites? Should they be treated more like a phone conversation or electronic print? Privacy of personal information exchanged during, or stored as a result of, communication through emerging technologies is another area of concern. Additional privacy concerns arise when insurers purchase data from a third party-vendor who tracks consumers' personal information and preferences from social sites. Potential suitability issues related to red-lining can arise if an insurer or producer specifically excludes consumers based on consumer preference and statistics gained through social media or third-party vendors. Other suitability issues include the ability to properly disclose information on products and services, given the space limitations on mobile phone screens or social media posts. The proliferation of Internet use to potentially vulnerable segments of the population through the expansion of mobile devices also deserves attention.

There are over 1 billion mobile users in India as of December 2014, around which 600 million are urban users and 400 million are rural users. This means that it has become a necessity that there is a proposition to be offered to the mobile customers. Extending the business capabilities to mobile devices has quickly become a fundamental requirement for companies. Customers increasingly expect it and business

partners and employees have become more comfortable with communicating and sharing information anywhere, through any device. In a recent IBM Insurance Global CIO Study, it was found that there is a huge potential to leverage the mobile platform for investments. In the same manner in which banks had taken to mobile banking applications a few years back and offering a mobile proposition, insurers might have to do the same. Till date, insurers have restricted themselves to creating applications for quote generation and simple affinity based product sales. However with the growth in mobile applications and smart phone usage, applications to assist in the sales process for agents/brokers are being developed. Several insurance companies in India have pilot tested the use of smart phones for the initial product information and filling of application forms to reduce policy issuance time. Further applications are being developed for agents to access their training modules and their performance to date on the smart phones. As mobile users are already KYC compliant and with Aadhar-enabled bank accounts, piggy banking on the mobile wallet, mobile banking platform to offer insurance solutions is a cost effective method to tap a large market.

Effective use of technology is going to be a crucial factor in sharpening productivity and customer responsiveness. This isn't just making use of greater automation to reduce costs and quicken delivery, but also harnessing digital developments to spur greater innovation and differentiation.

### **Agile new entrants**

The urgent need to strengthen agility, productivity and customer focus is heightened by the growing threat from new entrants. The development of internet channels has allowed companies to reach new customers and markets without the need for a physical presence and with low variable cost, though the initial investment has been considerable. Cloud computing and other advances in storage and processing power are allowing agile companies including new entrants to harness state of the art connectivity and analytical capabilities, without the high fixed cost. As they will only be using the computer power needed to meet their current requirements this just in time 'virtual outsourcing' approach would allow them to break into new markets and flex up as their customer base grows with much greater flexibility and lower costs than new entrants in previous eras. They can also tap into social media and other external data to profile their target customers without the need for extensive data bases.

For the insurance industry the nonstop wave of technological change creates both challenges and opportunities, but the ultimate success of incorporating new technologies is influenced by a number internal and external factors. These factors influence how companies are leveraging technology for consumer engagement, competitive differentiation operational speed and risk management. The areas of focus for the insurance industry and the internal and external influences that act upon them can be represented in the following paragraphs.

### **Customer Engagement and Customer-orientation**

The Pennsylvania Railroad Company, the largest railroad by traffic and revenue for the first 50 years of the 20 Century, and at one time the largest publicly traded company in the world but which ultimately went bust "not due to other rail competitors, but a disruptive technology called the airplane."

Are insurers responding to these challenges or are they starting to fall behind?

Consumers are at the heart of the business, all will agree, whether from a technology background or focused on marketing or R&D in the words of Legal and General: "becoming customer centric is no longer a nice-to-have, but a must-have.... Insurers must therefore have... the ability to deliver value (not just products) to customers directly; regardless if the customer is a person, family or firm"

Allianz highlights the importance of building technology to address three core customer challenges at the heart of life insurance. They explain these as follows:

- The 'geek trap' – a high proportion of consumers do not purchase enough life insurance because they perceive it as overly complex and difficult to understand;
- The 'too much love trap' – many consumers are turned off by the hard sell of the traditional face to face sales channels; and
- The 'drifting apart trap' – the customer's contact with his or her insurers can quickly reduce to a once a year statement, the business equivalent of a round robin Christmas Card.

So what are some of the answers? In my view these include simplifying products to appeal to the casual or entry level buyer, bringing products to market in a consumer centric, relevant and technologically enabled way, and modularising products to drive both efficiency and differentiation. Products and propositions are only part of the equation – just as important is leveraging technology to enhance the customer experience and provide relevant information as the consumer researches on line and to find ways of connecting consumers with advisors who will remain an important source of expertise, especially when the need is for more complex and holistic planning and guidance.

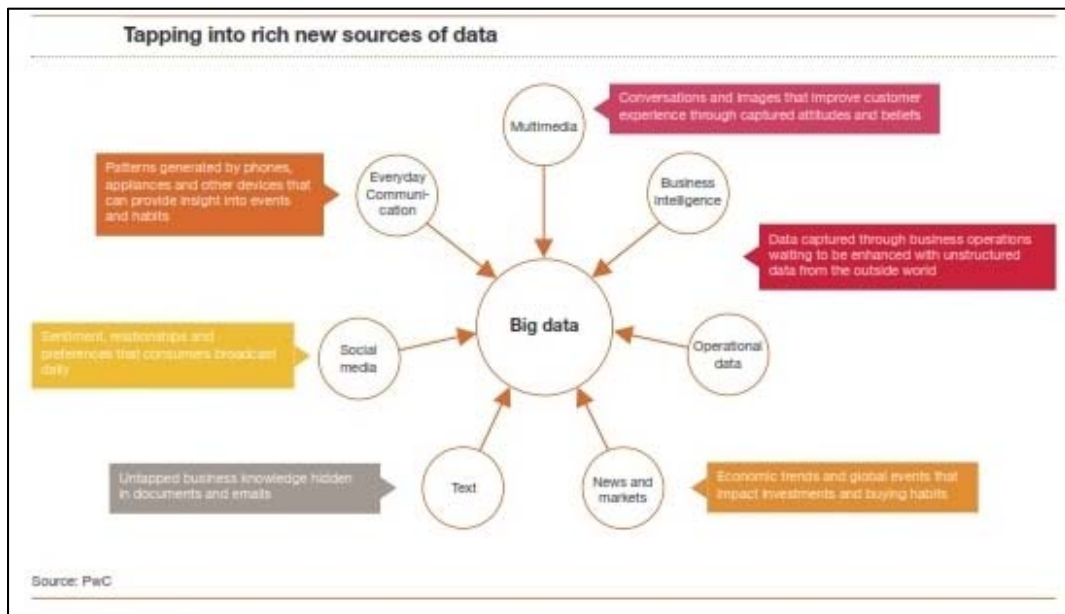
Sun Life Financial brings these to life for us, highlighting their BrighterLife; standalone lifestyle forum designed to build the company's brand, providing a broad range of tips and information on everything from healthy cooking to career management and their Money UP app, a gamification approach to improving financial literacy and more fully engaging group savings customers.

The impact for products and markets These changes have a profound impact for the propositions that insurers provide and the markets in which they offer them and the commentators agree on the increasing importance of data, the buzz words of 'big data' and the importance of analytics to analyze the massive data sets that are growing at an unimaginable rate forming both a by-product and driver of the technology revolution. Skillfully mined and analyzed, big data has the potential to reveal a unique and in-depth view of the market that could enable more meaningful segmentation, inform product development, risk management and underwriting – and enrich the customer experience.

Allianz points us in the direction of the automobile industry to provide an interesting example of how both target customers can continue to have more and more offers and yet the 'back office' production economics continue to improve. "Volkswagen Group, for example, has introduced extensive modularity into its range via its Modulare Baukasten (MB) strategy that standardizes on elements that are less visible to

consumers so that there are significant shared components and economies between multiple brands yet more, and more differentiated, models in the market. Efficiency does not necessarily need to be sacrificed to achieve differentiation.” As well as helping insurers connect with existing customers with changing needs better technology also enables insurers to

connect with customers with whom they have enjoyed less familiarity. Legal and General notes that “delivering global services that are relevant locally will play a major role in supporting growth, as in the future we will need to reach customers and markets with services that we may not currently serve today.”



**Fig 18:** The new model of life insurance management

Those customers may be closer to home than we expect. It is often observed that in “In life insurance... physical examinations are common [and] the timeline for purchasing insurance is often measured in weeks rather than seconds. While invasive underwriting evidence provides very strong protective and sentinel value that allows insurers to combat adverse selection, it may serve as an impediment to efficiently reaching the underinsured younger or middle-income markets. New medical technologies, smart phone apps and data-driven predictive modelling solutions offer opportunities to bridge the information gap between applicants and insured’s while drastically reducing the length and invasiveness of the underwriting process.”

Many insurers are looking to grow among the growing middle class of the emerging markets of South East Asia, Latin America and Africa. As Sun Life Financial comments “While North American and European life insurance markets are mature, the potential for insurance in the developing world is estimated at between 1.5 and 3 billion policies, with life and health insurance being the products most in demand. These markets not only skew younger, they are also increasingly mobile equipped. In the developing world, mobile subscriptions more than doubled from 2011 to 2013, surpassing those in developed countries in 2013.”

So insurance propositions themselves are changing, reflecting the impact of technological change as well as how insurers communicate with their customers. The challenges for distribution and operations Insurers face many challenges in responding to these opportunities. As Legal and General note, “currently the primary route to market for many life insurance companies is to manufacture products, put them on a shelf, and distributors then sell those to customers. In order to engage

customers directly, this route to market will need to fundamentally change in order to embrace the digital world that people live in today.”

Allianz comments that “Consumers, however, are ahead of industry debates and are blending their use of offline and online channels. In this omnichannel world, web journeys are proliferating BUT increasingly less predictable AND not necessarily likely to result in a transaction. Offline iterations are, at the same time, very relevant but perhaps only for part of the journey, whether at the research stage (e.g. brochures from a travel agent, car dealers) or at the transaction stage (as is common in insurance). This ROPO (Research Online, Purchase Offline) behavior is well-documented across multiple industries and very visible in life insurance.” Sun Life Financial underscores the need for personal contact “The near universal adoption of social media by a younger-skewing demographic, coupled with mobile platforms – i.e., smart phones and tablets – has accelerated and cemented a real-time, virtually They interact digitally almost constantly; researching products and services, buying, socializing, opining, ‘listening’ and seeking advice and validation. For this younger cohort, e-mail and desk-top computers are as quaint as black rotary telephones. If insurers want to reach them, they must reach them where and how they live – online and on the move. In the process, they must also accommodate their conflicting demands for both openness and privacy.”

But does this mean that the role of the intermediary is redundant? In the view of Sun Life Financial the answer is a resounding no. “To effectively sell to this cohort, intermediaries need to be active in the space. Insurers can position their intermediaries for success by leveraging their own investments in digital expertise to equip advisors with

mobile and social media capabilities that facilitate a digitally-enabled advice and sales conversation. Social media can be used to train, inform and motivate intermediaries. High definition video conferencing, tablets with e-signature capabilities and other interactive mobile applications can make prospecting more efficient and expand their geographic reach.” As well as transforming the way in which insurers reach their customers, technology also has potential to transform how insurers service them thereafter. For example many research firms identify challenges which technology can help insurers overcome such as the benefits of automation, while Sun Life Financial highlights the opportunities presented by “cognitive computing – computing systems modelled on the human brain. These systems process speech, images and a whole range of contextual, behavioral and unstructured data in real time, ‘learn’ by experience, and adapt their outputs accordingly.” And as Legal and General notes, “Cloud services have dramatically lowered the entry price and running costs of providing highly scalable online services, resulting in a flood of new digital online companies” commenting that “these innovations came at a time where many large companies – especially in the financial services sectors- were reducing investments in IT and running cost reduction initiatives.”

Technology has created new opportunities to engage customers through the quantification of health and fitness data. Insurers such as Aviva and Discovery Health have developed wellness programme and policy riders that offer discounts and other rewards to incentivize health behaviours. Customers are rewarded for regularly visiting their doctors, for exercising, maintaining healthy weights and even for purchasing healthy foods. These programmes aim to reduce claim costs, but they also align with the customers’ own goals of higher quality of life with lower morbidity and improved longevity. As the market for activity monitors and more advanced wearable devices expands the opportunities for insurers to integrate these technologies into insurance products to incentivize healthy lifestyles will continue to grow.

### Gamification

Consumer engagement can be enhanced through gamification. Property and casualty insurers through Progressive and farmers have embedded insurance concepts inside the popular games Sincity and Farmville to increase brand awareness and drive primary demand for insurance. Life and health insurers have also developed games to educate consumers and motivate healthier lifestyle choices. Insurance is confusing to many people and games have proven successful at reaching and educating an expanded audience, for example games can be used to improve financial literacy and help consumers prepare for retirement. Such interaction with the customer improves the company brand and builds a bond with the consumer.

### Telematics

It has revolutionized the pricing structure of automobile insurance. Instead of using broad rating variables, individuals are evaluated based on personal driving behaviour. Usage based insurance is still in early stages, however, and it continues to expand as more companies develop programmes and new technology emerge. These programmes have enjoyed broad support from regulators, as well as customers who feel empowered as improving their driving performance may help them receive lower premium rates.

### Server Virtualisation

Another technological advance fuelling cost savings and flexibility is server virtualization. The rapid increase in data often leads to proliferation is physical servers to store that data. In addition to direct costs each additional server creates more maintenance, support and energy costs. Through virtualization, independently portioned virtual servers can co-exist in a single piece of physical hardware.

### Conclusion - Looking ahead

Technology will continue to transform the insurance industry. Private investments have encouraged innovations in mobile phone size diagnostic tools that will rival the Star-Trek tricorder, and advances in genomics may lead to individualized medical care and treatments. A future with self driving cars may reduce motor vehicle accident risks to such a level as to make the automobile insurance market irrelevant. Advances in quantum computing will someday increase the feasibility of dealing with even larger volumes of ‘Big Data’ and transform the traditional risk selection process in the insurance industry.

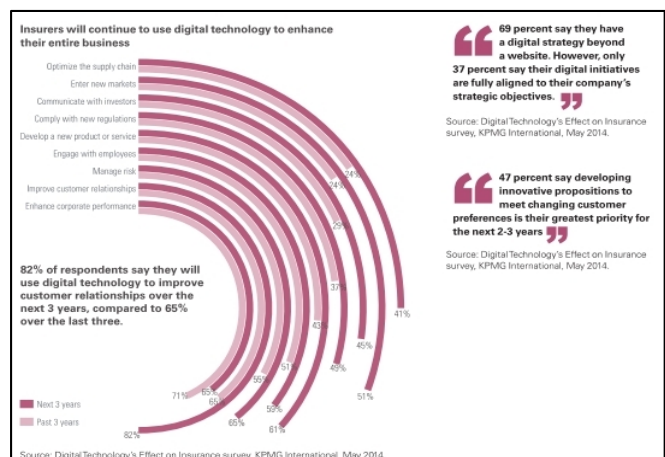


Fig 19: The use of digital technology in insurance

Despite a perception of conservative stagnation the insurance industry has made steps towards embracing technology driven innovation. Insurers are able to leverage technological advancements to engage customers and mitigate risks, communicate more effectively and refine pricing & underwriting. The companies that are able to use the advancements to increase efficiency and to develop new products will lead the way through the next era of technological progress.

Insurers have realized the importance of going digital yet many are still in the nascent stage, testing the waters and offering basic digital functionalities. Despite the conservative nature of the industry overall, a few firms are leading the way in terms of offering advanced digital features to their customers.

Insurers can no longer afford to take incremental steps on the road towards digital services. They need to be proactive in enhancing the customer experience through all digital touch points, while also driving operational excellence at the back end to ensure profitability. There is no denying the growth of the digital life styles of today’s consumer, and anything less than a top to bottom approach to digital transformation will fail to adequately deliver. As customer expectations and demand for advanced digital services increases, insurers need to

implement a comprehensive digital strategy. Those that can execute a complete digital transformation will be able to achieve significant revenue generation and cost saving opportunities.

The life insurance industry is robust, well capitalized and competitive offering a wide array of desirable products and services to public.

In the above discourse I have tried to join the dots to see a clearer picture of Life Insurance industry, it is a futuristic scenario which is very much possible in 2030. With new technologies, better management and capital adequacy we hope to see a vibrant insurance market in days to come.

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