Back from the Future

Key issues and emerging opportunities in the UK Life & Pensions market

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The UK Life and Pensions market is facing enormous change. There will be winners and losers.

Providers need to review not only their short-term solutions but also their long-term strategy. Undoubtedly for most, this will mean some tough decisions. For many, it may involve re-engineering their current business models.

Pressures on costs and charges, new legislation and demographic changes will all be key drivers of change. At the same time, new opportunities are arising to deliver innovative solutions for tomorrow’s customer for savings, protection, health and income generation.

aquilaheywood has worked with Global Futures and Foresight to deliver this Whitepaper on what the future might hold and the challenges that may need to be addressed. They will, of course, vary based on each organisation's objectives and planned focus.

Whatever those objectives are, there is no doubt in our mind that technology will play a key role, not least in delivering a customer experience that is intuitive, effortless, consistent and personal.

We hope you find this paper thought-provoking.

Jim Aitken
Group Head of Marketing
aquilaheywood
1 - Executive summary

Structural change is a given for those in the Life and Pensions [L&P] industry.

Global economics and demographic trends are colliding with organisational change, driven by a demand for new services, increasing regulatory issues and emerging technologies. The result is that many in the industry will need to confront and overcome new challenges and ways of doing business if they are to remain successful. When it comes to trust, for example, customers rank Life and Pensions providers lower (at 44%) than even current account banking (at 60%).

As well as proving a significant challenge, the new environment is ripe with opportunities for insurers and other players that have the ability to recognise and act upon change. The successful insurer will increasingly embrace a digital agenda. This will include the Internet of Everything (embedded devices linking people, processes and data), and also the analytical capabilities to examine the resultant ‘big data’ (large and complex data sets that defy traditional analysis). At the same time insurers must adapt to the shifting realities of a rapidly ageing population. Changing government policy and consumer preferences are impacting the landscape of people saving for, and the funding of, their later lives.

This report examines a great many drivers of change impacting on the industry. As a consequence, players in the L&P market along with health and long-term care services providers will be required to make significant changes to the way they work. They will all need to embrace new and emerging technologies, re-orient their focus away from products and onto the consumer and engage with a rapidly expanding global market. This will require changes to the organisation, its processes and practices, its use of technologies and how it engages with its value chain in order to create innovative and consumer-centric offers.
Globalisation

There are over 100 million new middle-class consumers appearing in the world each year, mostly in the developing markets of Asia. Life and Pensions firms will be well advised to consider how they can access those markets to improve their profitability. This will demand new skills and knowledge of local regulation and consumer behaviour. At the same time, new entrants are incubating in these fast-growth markets and may one day soon look into the developed economies and see lucrative opportunities for them to address.

Technology

Firms will increasingly need to master the opportunities and disruption that new technologies bring. No longer will it be acceptable to consumers for firms to dictate how they will engage and communicate, or to keep offering the same old products and doing the same old things through the new channels and over the Internet on the latest mobile devices. The real challenge for players in the Life and Pensions industry will be to understand what new products and services they can offer to consumers to address savings, health, long-term care, life protection and pensions needs and how to blend new sources of information into their business processes.

Ensuring that the Chief Information Officer (CIO) and Chief Technology Officer (CTO) work well with the Chief Marketing Officer (CMO) will be a critical success factor for L&P firms as they seek to become more attractive to the increasing numbers of ‘digital natives’ in their target markets.
For a great many years it has not been necessary, or even desirable, for Life and Pensions firms to be innovative. Stability was of paramount importance. The shocking demise of Equitable Life and the recent banking crash demonstrated to most consumers that there was no such thing as a rock-solid financial institution - they are all vulnerable. What consumers want today is the opportunity of digital engagement, 24/7 availability and an ability to personalise your offers to their taste.

The siloed structure of most insurance firms militates against being consumer-centric. Today, however, organisations need to work across silos in collaboration to adapt offers to increasingly small micro-segments of their target market. This will require a deliberate effort to break down internal barriers, and between external partners and themselves, if the consumer is to see any great change.

The days of the ‘inside-out’ approach to consumers is coming to an end and ushering in a consumer-centric ‘outside-in’ paradigm. These two are as alien to one another as night and day and form a tough chasm to cross. Some may achieve this; some may not.

Culture will need to adapt to new requirements but; undoubtedly; so will the organisation’s operating structures. Product and market silos bring efficiency and customer service; but they act as a brake on innovation in product offers and service capabilities. Breaking down the barriers between outside players, distributors and even new-entrants, as well as traditional value chain players, is usually considered vital in order to build an innovative and agile organisation. To thrive in the future, Life and Pensions firms will need to develop the capability to change both operating structures and corporate culture.
There are a great many drivers of change impacting the L&P industry today and their number is set only to increase over the coming years.

Driven by technological advances, shifting consumer expectations, global economic activity and government policy, the successful players in the future will not just keep abreast of these drivers of change, but seek to adapt themselves as their importance grows.

Here we review some of the more significant drivers impacting the industry.
Economic environment

The European Commission predicts Eurozone growth of 1.1% in 2015, which raises doubts over the ability of Europe to escape its debt crisis. 2.4% growth for the UK in 2015 is now foreseen, with both forecasts lowered from the early 2014 position due to increasing risks. For the G20 economies as a whole, Moody’s expects GDP growth of around 3% in 2015 and 2016. Several markers that have delineated the ‘new normal’ post-2008 period, such as a low interest rate environment, relatively high structural unemployment (where supply outstrips demand for labour) and high government debt ratios look entrenched for the short to medium term, at least in many western economies.

Global change

The rise of the middle class in emerging markets is fuelling increased consumption, which is leading to impressive small business growth. Globally, 4.2 billion people are forecast to be middle-class by 2025, up from 2.4 billion in 2010, which is rapidly reconfiguring the global map of market opportunities and challenges.
Key issues and emerging opportunities in the UK Life & Pensions market

Changing markets

As a result of rapidly-shifting consumer markets and economic opportunity more generally, Asia-Pacific is forecast by Munich Re to be the dominant driver of world insurance growth by 2020. In fact, 30% believe new emerging market insurers will move into the developed world to become global insurers. Meanwhile, 28% foresee truly global markets.

Whether or not they become truly global in terms of competition, many industry players, such as Prudential, are developing a global footprint and focusing on regions such as Asia to maximise profit margins. Incidentally, Reuters (2013) reports that the price-to-book ratios of Asian life companies are two to four times those of comparable UK firms.

Market outlook

The relative economic and financial weakness of Europe is one of the reasons for more insurance companies across the EMEA (Europe, Middle East and Africa) region seeing themselves as sellers of business units rather than buyers over the next three years. More than 60% of the 264 respondents to a recent Towers Watson survey of senior insurance executives said they expected to divest non-core operations before 2017 to focus instead on core markets.
3 - What’s going to drive the day after tomorrow?

New models

Several new models are emerging since, ‘...the use of predictive analytics in insurance is becoming increasingly widespread as companies realise how the power of insight can impact business growth, risk management, and loss control’.

However, the emergence of new models will have more than just a technological dimension to it. The second is a cultural - or organisational - shift. Insurers must bridge the CMO-CIO divide to become truly customer-centric, says Accenture. Redrawing the business along socially-collaborative lines and reframing the business culture is essential for such changes to occur.

The predominant insurance ‘inside-out’ culture, notes KPMG, may hinder this. For example, it is suggested that with regards to possible partnership with retailers, ‘...the financial industry tends to believe its data is best, so may be hesitant to explore new approaches’. Good data of course, is no substitute for effective value extraction.

New entrants into the market possess significant strengths. Closer relationships including collaboration will be needed for many incumbents in order to craft the key data-modelling strategies that enable volumes of data to be analysed for insight, and to deliver a better customer experience, as well as satisfying compliance needs.
Regulatory change

Such compliance needs are ever changing. 88% of UK senior executives feel that regulatory change is preventing their organisation from addressing other urgent business priorities.

However, regulation is no longer simply a compliance challenge. Once regulators start interfering in the funding of liabilities, regulation becomes a strategic business challenge for institutional investors and the firms that advise them.

In response to regulation, life insurers are offering fewer products (49%), limiting guarantees (40%) and raising prices (35%). Barclays has forecast that the value of new UK annuity business would fall from its current £12 billion annually to £4 billion in 2015 thanks to the pensions and annuities shake-up. On the other hand, and according to Towers Watson, wider savings market trends will result in projected annuity sales rebounding to over £10bn by the end of 2023.

Oliver Wyman forecasts that, in ten years’ time, the industry will have £1,200 billion on insurance platforms, and will be paying pensions of around £35 billion per annum. It also notes that the UK life insurance industry now has a more clearly-defined role in the economy, ‘... serving as the private sector component of the social security system, helping workers to save for their retirements and managing their savings post-retirement’. There are two stand-out opportunities which are the UK’s new flexible retirement system and the bulk annuity market, which are expected to capture between 25% and 50% of the UK private defined-benefit scheme assets of £1,200bn over the next 20 years.

Towers Watson’s poll of UK-based life companies identified that over two thirds expect to completely re-engineer their end-to-end reporting processes to comply with Solvency II. Some require far-reaching change. Germany’s insurers may need to build up more than €10 billion in extra regulatory capital by 2016 to meet requirements. Restructuring also is evident in response to regulation, with some European insurers placing their life insurance books

Regulation is no longer simply a compliance challenge... (it is becoming) a strategic business challenge
of business into runoff to release trapped capital. These insurers are reallocating this capital towards higher-growth market opportunities in Asia and Latin America\textsuperscript{20}. In the UK, Celent identified that 39.6\% of premiums for life, annuities and pensions were from non-strategic or closed books.

**Consumer-centric models and engagement**

While many consider regulation a challenge, it could also be seen as an opportunity. Business models must change, not only in fulfilling regulatory requirements, but to meet an increasingly demanding public. Improving customer experience can increase an insurer’s gross premiums by $75-$150m per year\textsuperscript{21}. Research also suggests that up to $600 billion of global consumer demand is prone to switching insurance providers in 2014 alone\textsuperscript{22}, yet Life and Pensions providers face lower levels of engagement and satisfaction than even banks (44\% of customers are satisfied, compared with 60\% for current account banking).\textsuperscript{23} New models must fuse engagement with transparency. Customers rank Life and Pensions providers lowest among all financial companies when it comes to trust and how convenient they are to deal with. Only 31\% of Life and Pensions customers feel they could manage their policy in a way that suited them, and 39\% strongly agree that products are too complicated and unnecessarily confusing. In addition, only 38\% of customers said their Life and Pensions providers offered value for money, and only 37\% indicated that their insurer provided clear and transparent communications.

Examples from the L&P industry would appear rare, but do exist. CosmosDirekt from Germany targets its customers and modernises the customer experience through its online pension product that gives its customers the option to ‘build’ their policy through modular components. This not only engages customers but gives them a degree of control over their premium levels\textsuperscript{24}.
Always on

One in five (21%) UK adults already use either a wearable device or a health-related mobile app. Meanwhile, a third (31%) are interested in using a smart watch with fitness functionality, with 40% interested in a device that tracks heart rate, blood pressure and movement and 34% a device that tracks steps and sleep.

Uptake of wearables, (computer technology we wear as opposed to carry), and related applications, is being driven by Millennials (those born between the early 1980s and early 2000s) and it is important to recognise the wider impact they will have on the way business is conducted. 52% of UK Millennials believe that brands can be a force for good, yet 40% have a negative attitude towards the ways in which brands communicate with them.

Furthermore, social issues seem to be of increased importance to this cohort. 54% state they would be increasingly loyal to a brand if it helped further social or ecological causes, and 59% believe that brands should actively participate to improve such causes. Interestingly, there is evidence that this cohort may be more economically conservative than is widely reckoned. A larger percentage of the 16-24 cohort has savings than any other grouping bar the 65 plus cohort. Were the right products to be offered and marketed correctly, there would appear to be fertile ground for greater insurance penetration and pension interest in both Gen Y, who are today between 20 and 37 and Gen Z who are just 2 to 19 years of age.
New players

One perhaps unintended consequence of regulatory change is the lowering of competitive entry barriers. For example, BlackRock, the world’s largest asset manager and player in the Defined Contributions (DC) market ‘...intend(s) to put a lot of effort into putting together more retirement products’, in the UK L&P market after concluding that government reforms could lead to the collapse of the annuities market. Emerging competition is likely to reach into tech- and data- related industries as the entire business ecosystem is reconfigured. The extent to which barriers to entry are being eroded is highlighted by Accenture which notes that ‘...fund managers have made their intentions to play in L&P clear and even Walmart now provides personal lines insurance’.

As in other industries, the days of silo decision-making, where one person or department has control over a purchase is rapidly disappearing. As technology is a key driver in the current and future insurance paradigm, the ramifications for insurance IT are far-reaching. When it comes to collecting and organising information, Google is well on its way to establishing its dominance through the registration of six billion daily unique searches and indexing of over 50 billion web pages (2013).

In a recently published report in cooperation with the Boston Consulting Group (BCG) India, Google concludes that, in addition to travel, digital media, ticket purchases and books & magazines, insurance is among the top five product categories in which the Web is the dominant purchasing channel. Common for the other four product categories is that the traditional sales channels have long been redundant as a result of digital disruption. The same report predicts that 75% of all insurance purchases will be online by 2020. If these predictions are accurate, it will give Google a dominant position as the primary sales channel for the insurance industry.

The danger is that, by the time many incumbents realise both the challenge as well as the potential of collaborating with such new entrants, it will be too late; the emerging players will have scaled a business model that excludes incumbents.
New health and longevity

Digital healthcare would appear to be a medium much in demand, and could ostensibly form a key part of any emerging player’s strategy. 75% of respondents to a McKinsey survey suggested they would like to use digital healthcare services, as long as those services meet their needs and provide the level of quality they expect31. Interestingly, 70% of patients over 50 in Germany and the UK want the option of digital healthcare services. This suggests two things, that:

1. Boomers and older generations are not as technologically incapable as may be assumed.

2. Customers are aware of the power of technology to bring down their long-term care costs and improve its management.

For example, electronic avatars, either in holographic form or via a screen, (as in a University of Kent project which utilises a TV), could monitor heart rate and blood pressure as well as provide medication reminders32. Diagnostics are becoming decoupled (at least physically) from professional service providers thanks to technology, and this could help consumers from both an economic perspective and in terms of wellbeing. One significant issue arising with increasing longevity is elderly loneliness. The number of men over the age of 50 suffering from severe loneliness in England is expected to rise by 65% to more than 1 million in the next 15 years33. Avatar technology could help tackle this issue, but the greater point is that the L&P industry could look to improve its understanding and response to cognitive and social decline, with policies, technology and processes designed inclusively for a more painless customer journey.

Avatars could also be the vehicle by which cognitive computing (such as IBM’s Watson) appears. Use of Watson has already been deemed to improve doctor accuracy in diagnosing lung cancer by 40%34. Further evolutions promise more efficiencies in terms of time and cost, as well as saving lives.

The UK’s Medicines and Healthcare Products Regulatory Agency (MHRA) says the £125 ‘23andMe’ spit test, which is designed to give details about a person’s health risks based on their DNA, can now be used in the UK with caution. The price for genome sequencing will soon decrease to £66 ($100) – and eventually go even lower35. The impact on human health will be profound and the implications for insurance - in terms of life expectancy alone - will
be immense. In 2010 it was announced that a major Australian insurance company, NIB, was planning to offer half-price genome scans from personal genomics company Navigenics to 5,000 of its customers. Several legal issues will almost certainly arise, but it has been noted that ‘...banning insurance companies from using genetic data undermines the entire premise that insurance is based on’. Genomic based health predictions could allow customers to purchase a more appropriate level of coverage, using privacy arguments to disqualify insurance companies from calculating premiums based on the same information and could destabilise the current insurance system. If insurers cannot use this information to calculate premiums then the system is untenable, but issues surrounding the weight given to genetic data in calculating premiums could be controversial given inherent privacy issues.

Several aspects of the life insurance value chain are set for disruption. It has been suggested that ‘...the health industry is where the music industry was with the vinyl LP’. In essence, every appointment begins with clinicians having no insight on how their patients are doing. The formation of a digital healthcare ecosystem to help fill this gap is emerging in which ‘...apps are going to be used as often as antibiotics’. The global mHealth market could grow eight-fold from $5.1 billion in 2013 to $41.8 billion in 2023 and could help form a key part of a new preventative health platform.
Mental health

Nowhere is such an intervention more needed than with mental health. 38% of EU residents are said to be affected by a mental illness at some point in any given year⁴¹, while mental health issues cost the UK ~£70 billion per year in lost productivity, benefit payments and health care spending⁴².

Studies suggest that as much as 95% of the UK population are not even doing the minimum recommended amount of physical activity to confer even basic health benefits. Sedentary lifestyles lead to more than 40 medically recognised chronic diseases⁴³ - including mental health issues - and sedentary leisure time is expected to rise in the UK by 52 hours per week by 2030⁴⁴. Medical costs associated with treatment of chronic diseases are estimated to increase by £1.9 - £2 billion per year in the UK by 2030. The number of people in the UK aged 60 and over who will be living with dementia is projected by the Office of Health Economics to double over the next 25 years and to reach two million by 2050⁴⁵. The economic cost to the UK of caring for people with dementia could more than double from £23.6 billion in 2014 to £59.4 billion by 2050.

Longevity

The primary reason for increasing levels of dementia is, of course, related to the ageing of our society, yet this very link could come under scrutiny in the years ahead. Aubrey de Grey, co-founder and Chief Science Officer of the SENS Research Foundation, believes that ageing itself is a disease. Ageing is a destructive biochemical event, he notes, and scientists are on the brink of developing interventions for all of its life-destroying processes. Living to 1000 is theoretically possible he notes, adding that such increases in longevity would result in “...extending the period of life that we now consider ‘youthful’ and postponing bad health, as opposed to living more years of what we now term ‘old age’”⁴⁶.

Such claims may appear fantastical, but there is a growing belief within the scientific community that nano-medicine and a greater understanding of ageing itself will usher in a new world. ‘There are many components of ageing and we are chipping away at all of them,’ notes Robert A. Freitas at the Institute for Molecular Manufacturing. ‘In the future, ageing will be cured’, claims Freitas⁴⁷ and this future could be realised within two to four decades.
Such changes would radically alter the longterm care (LTC) market. Change is on the horizon in any event for LTC in the UK in 2016 with the recent signing into law of The Care Act 2014. One of these changes includes the much-publicised £72,000 ‘cap’ on long-term care costs. Towers Watson notes, however, that the cap applies only to a portion of the local authority care rate - individuals or their relatives remain fully responsible for room and board costs and, if staying in a private facility, any care charges over and above the local authority rate. This could form a potentially lucrative market. For a start, there will be a 31% increase in people of pension age by 2037, who no longer effectively have to annuitise their accumulated pension funds.

However, within the healthcare ecosystem, incentives for players remain misaligned. The profit potential delivered by existing models for the LTC, health and L&P industries all rely on differing degrees of wellness at different stages of life for large numbers of people. Extreme longevity as advocated by de Grey and Freitas need not be the factor to bring this tension into focus; foreseeable ageing will stress the foundations on which many of the models in the aforementioned industries are built.
Affordable health provision

A further key driver of potential change recognises the long-term unaffordability of public sector funded health provision. We may well see a faster move to a more privately funded health service in order to reduce the burden on the state. This will offer new opportunities to product providers, but may also become a primary call on the population’s finances.

Demographics

Even though there are ongoing concerns of new pandemics, increasing obesity and the development of super resistant bugs, the general view is that average life spans will increase. The number of people aged 65 and over is projected to increase by 23% from 10.3 million in 2010 to 12.7 million in 2018\(^5\). Indeed, ageing is set to be a more defined feature of our society; not only are increasing proportions over 65 but once there, people are tending to live longer within old age itself. By 2015, those aged 40+ will outnumber under-40s and this trend is set to strengthen since the life expectancy of two of every three girls being born in England today is reportedly now greater than 100 years\(^5\).

If one fact encapsulates the rate of ageing in the UK, it is that more than 1,700 British people reach age 65 every day\(^5\). 10.3 million people in the UK are over 65 years old, and by 2030, the number could hit 15.5 million\(^5\). The UK government has already begun to address the need to delay the availability of state pensions. We need to establish what retirement will mean in the future and when it starts, as increasing numbers of people work into old age.

Retirement will no longer be a cliff-edge experience but, rather, a gradual process and perhaps, for many, a non-existent reality. Nevertheless, the impact on both employers and L&P players is profound. More than 15 million people in England are living with at least one long-term condition. This figure is expected to hit 18 million within 20 years\(^5\). By 2030, some believe that one in two UK workers will have a long-term condition\(^5\). The 2012 Dilnot report notes the impact this will have on long-term care costs – some 75% of people are expected to incur costs of £20,000 for long-term care, while 10% could have costs exceeding £100,000.
Silver wealth

The older generations seem better able, on average, to manage such costs. Between 2002 and 2012, despite the global financial crisis, spending by over-50s in the UK grew by £100 billion. Thanks in part to significant student debt and high mortgage barriers, the average 45-64 year old has over twice the personal wealth of the average 18-44 year old\textsuperscript{55}. In fact, data suggests that more than 30\% of the UK are aged over 50, and they control 80\% of the wealth\textsuperscript{56}, while people in their 60s alone own a quarter of all property wealth in the UK equating to £993 billion\textsuperscript{57}. As such, the UK life insurance ecosystem has an opportunity to become the retail interface between the UK’s workforce and pensioners and their retirement savings. An alternative prognosis could be that ownership of bricks and mortar becomes the preferred and most trusted form of funding for old age.

The average 45-64 year old has over twice the personal wealth of the average 18-44 year old
New social norms

Society, its family make-up, home occupancy, working practices, age, activity levels, spirituality and ethnicity are all changing at a rapid pace. These changes, along with many other influences on consumption patterns, are modifying how people want to buy products and services and engage with their financial service providers in the UK. Life and Pensions firms are now realising that it is their turn to adapt to these pressures. When an enterprise fails to adapt it can consign itself to irrelevance, as many ‘blue chip’ organisations have already found out. Peter Drucker explained, that it is often because ‘...the assumptions on which the organisation has been built and is being run no longer fit reality’58. How we live and work is undergoing a period of considerable flux, and products and services need to adapt to this ever changing lifestyle or long-term, entrenched providers, could find themselves rendered irrelevant.
Family and households

There were 26.4 million households in the UK in 2013. Of these, 29% consisted of only one person and 20% consisted of four or more people. There are expected to be a further two million single occupancy households by 2020\(^59\). The make-up of our households is undergoing significant change and will require financial solutions that meet the needs of increasing sole occupancy.

Stages of life

Despite the rise in single person households, more than 25% of young British adults live at home (nearly 3.5 million\(^60\)) and this could rise to over 50% of all 20-34 year olds within a couple of decades without UK housing market reforms\(^61\). The rising cost of living, coupled with static wage growth has affected the nation as a whole. Yet for the sandwich generation - those who are trying to support not only themselves but their children and elderly parents, financial pressures are greater and are at the root of a number of mental health issues. There are now over 2.5 million Britons\(^62\) in this generation, and this number will only grow.

Two-fifths (41%) of this generation cite worries over their finances as the prime cause of their anxiety, with 28% saying money worries keep them awake. For a significant number though, money worries are leading to deeper problems. Amongst 45-54 year olds with depression, concerns about finances play a greater role than problem relationships, ill health and family pressures, with four out of 10 (39%) saying that money worries are the main cause\(^63\).
35% of British workers are simply not contributing to any kind of savings

Financial health

Despite wealth being concentrated in the over-50s across many western economies, this belies deep inequalities within this cohort. It has, for example, been estimated that the annual pension savings gap across Europe stands at €1.9 trillion or 19% of GDP. It is estimated that 60% of European workers have no workplace pension provision at all, while a third of European consumers do not have any form of savings product64.

35% of British workers are simply not contributing to any kind of savings, and such a shortfall means that British employees are going to have to supplement their income in some other way or forego retirement altogether65. 41% expect to take a part-time job in retirement to make up for the shortfall in their savings, while 20% do not expect to retire at all. Equity release is another option. In 2013, older homeowners raised more than £1 billion through home equity release66. 60% of people use equity release to pay for home and garden improvements. Some 21% use it to clear debt, while car upgrades, holidays and helping younger relatives financially also feature67. However, ...‘to make equity release sustainable, we either need to see some product innovation to shorten the duration of loans or the government needs to remove the tail risk’, suggests Mike Kellard, CEO, Axa Wealth68. It is likely, however, that working in old age becomes a routine feature of future life; a quarter of UK employees could be working until they are 70 by 202869.

Changes at work

There is empirical evidence linking employees’ wellbeing to their individual performance. There is also recent evidence of a causal link between increased wellbeing and improved worker productivity70. Several workplace practices implemented at the behest of Gen Y demands are also benefitting Baby Boomers and older generations and, in fact, enabling them to work into old age.
Respectively, 86% and 85% of Gen Y and Boomers say it is important that their work involves ‘giving back’. That’s not as true for Gen X, who on average are 10% less likely than Gen Y to find this important. Overwhelming majorities of Gen Ys (89%) and Boomers (87%) say that having flexible work options is important. Similar percentages (87% and 83%, respectively) say that work/life balance matters to them, so it is not surprising that roughly two thirds of both groups also wish for opportunities to work remotely. Work spaces adapted to older people are, in some cases, also improving general work conditions for all workers: for example, BMW implemented 70 small changes in the workplace to cut the chance of errors and reduce physical strain. At the same time, the world of work is having to adapt to other new HR realities, with diversity becoming paramount.

Migration

Of the 698,512 live births in 2013, 26.5%, or 185,105, were to mothers born outside the UK. Although 57% of the rise in population over the next 25 years is projected to be through natural increase as opposed to migration (44%), almost a third of the former figure is forecast to come from migrant mothers. As a result, up to 30 million people living in the UK will have an immigrant background by the middle of this century. Of the 5.4 million predicted increase in the UK population between 2010 and 2018, some three million (56%) is the projected natural increase while the remaining 2.4 million (44%) is the assumed total number of net migrants.

Spiritual change

As a result of deep-seated social change, societal norms are shifting. Christianity is losing more than half a million believers every year, while the count of atheists and agnostics is going up by almost 750,000 annually. However, between 2004 and 2008, the Muslim population of the UK grew at an annual rate of 6.7%, making Muslims 4% of the population. Extrapolating from those figures would mean that the Muslim population in 2020 would be 8% and 15% in 2030, which raises several questions for the type of product being offered by financial services.
New technologies

An Economist Intelligence Report suggests that nearly four in ten worry that ‘...their organisations will be unable to keep up with technology change and will lose their competitive edge.’ Their worries are well founded - technology is generally reckoned to be moving between three and five times faster than management. Even relatively prosaic technologies can cause significant operational issues. Some 35% of large companies do not believe their web infrastructures will be able to meet demands of mobile. The bigger issue though, and one that is often missed, relates to how technology meshes with people, structures and business models. Technology cannot exist as an abstract or be layered on old foundations; in many cases, going digital requires a whole new business culture and set of operations if it is to be a success. It is the re-orientation in business culture from an ‘inside-out’ to an ‘outside-in’ perspective that really denotes technological success. This, notes Harvard Business Review, requires an organisation to ‘...outline, in detail, how you create and deliver the products and services your customers value...and understand that the chain will have to evolve over time’. Central to this change will be the emergence of data-based business models.

Technology is generally reckoned to be moving between 3-5 times faster than management

It is the re-orientation in business culture from an ‘inside-out’ to an ‘outside-in’ perspective that really denotes technological success
‘Obtaining a different level of insights (from data) will be one of the truly powerful opportunities of the next few years’

Brian Millar, Director of Strategy, Sense Worldwide

Data insights and predictive analytics

Going beyond predictive analytics, prescriptive analytics not only predicts a possible future, it predicts multiple futures based on the decision maker’s actions. A prescriptive model can be viewed as a combination of multiple predictive models running in parallel, one for each possible input action. Since a prescriptive model is able to predict the possible consequences based on different choices of action, it can also recommend the best course of action for any pre-specified outcome. Data will enable ever greater micro-segmentation of customers, increased personalisation for customers and a more effective search for new customers. Unstructured data comprises approximately 80% of total data held by an average financial institution. If data is the new oil of the insurance industry, then traditional incumbents will have to brace themselves for a wave of new competitors. Simon Douglas, director of AA Insurance, suggests that ‘...the winners in the insurance market will be the ones that have got the data insights that others don’t have. It could be supermarkets, banks or social media companies’.
Is insurance digitally capable?

UK life insurance and pensions have been among the slowest of business sectors to capitalise on the commercial potential of the Internet and digital innovation, even when compared to non-life insurers. Some 38% of UK consumers' interactions with pensions in the last 12 months were digital, as were 41% with life insurance, yet a significant percentage feel insurers are lacking key dimensions in this channel. 30% of those who did not buy or manage these products online would be happy to do so if providers were able to offer online advice. The importance of this will only rise: the number of so-called ‘digital natives’ is already beginning to overtake the number of traditional consumers; and this type of consumer will dominate the market by 2017. However, before insurers can thrive, the first step is to build an infrastructure to survive.

‘Digital natives’ will dominate the market by 2017

Building a digital infrastructure

89% of insurers expect competition to intensify in the insurance distribution market over the next three years, which should engender more consumer-focussed practices. 64% believe that this competition will come from non-insurance players, such as Google, or e-commerce giants like Amazon. Whether collaboration is possible with emerging players is questionable, but of little debate is the requirement to create a data-ready organisation and all that this entails for the culture and organisation of a business. 82% of consumers consider adoption of new technology important to retail experiences. Only 26% say businesses are transparent enough in how they use customers’ personal data, while 66% report sometimes not buying a product or service because of security and privacy concerns. The importance of technology extends beyond customer service, since the back-office and even procedural norms must be redrawn in tandem if the benefits are to be realised.
Overcoming legacy technologies

Building a future ready technology capability is perhaps more problematic for those with a significant investment in legacy technologies. Typically, insurance companies spend between 50% and 70% of their IT budget on simply running the business\(^7\), leaving little room for delivering the transformation of services that consumers demand, or would help the business run more efficiently. A 2014 Celent survey of insurance CIOs found that incremental improvement was the most popular modernisation strategy, being used by 35% to 45% of CIOs, depending on the core system\(^8\). A mindset that values incremental change over substantive change, while less risky in the short-term, is unlikely to prosper in a future environment characterised by constant disruption and the need to meet shifting consumer expectations.

Typically, insurance companies spend between 50% and 70% of their IT budget on simply running the business
Delivering digital value

E&Y research shows that, while insurers view digital as a key priority in delivering a better customer experience, 79% do not see themselves as digital leaders, and are instead trailing the spectrum in customer engagement, analytics and adoption of mobile and social media. Furthermore, 57% say their operating models do not facilitate digital and 89% say they do not consider past interactions when recommending products or services to online customers.

This last statistic is especially concerning, since a truly customer-centred company would analyse feedback and history to identify patterns and take actions that would improve the customer’s experience, based on how those actions will affect the economics of the business.

Only 71 companies remain today from the original 1955 Fortune 500 list. Companies such as Polaroid refused to acknowledge the shift to digital. In fact they had the leading digital cameras of the 90s but insisted that hard copies would always remain paramount. Customers disagreed and bankruptcy followed within a decade. Contrasting this ‘inside-out’ approach with the ‘outside-in’ of Amazon, which places the customer at the heart of the business model, is critical. Founder of Amazon.com Jeff Bezos’ letter to shareholders in 1997 set out a blueprint for building a customer-centric business, with a promise to ‘obsess over customers’.

More recently, Bezos quipped that ‘…when people ask me if our customers are loyal, I say, “Absolutely, right up to the second that somebody else offers them a better service”’. This service is not only built around price points and efficiency of delivery, but a business ecosystem built on analytics and big data.

Some insurers have succeeded in making this transition. An unnamed Australian bank, cited by E&Y, experienced high lapse rates in its life insurance portfolio, but managed to reduce this incidence by applying analytics to identify patterns, causes and solutions, resulting in a 7% profit improvement within six months.

Bain notes that ‘...in one of Allianz’s European life and health insurance operations, feedback revealed that customers had to call back repeatedly about the status of payments and were expected to describe their medical conditions again and again. An Allianz team figured out a process solution: on the initial call, a case manager would be assigned to the policyholder and handle all contact until the claim was resolved. Any delay in the reimbursement process would trigger a call or text message informing the policyholder of the claim’s status. Soon after implementing the new protocol, Allianz saw a double-digit increase in its loyalty score and a significant rise in policy renewal rates.’  

79% do not see themselves as digital leaders
In short, consumer centric business demands not only digital literacy and C-suite buy-in to redesigning products and refining processes, but also that the customer becomes part of the insurer’s DNA.

Mobile

Few technologies have transformed consumer and organisational behaviour as fundamentally as mobile. It is now often the first point of contact between a customer and an organisation. IBM notes that 90% of global organisations are planning to sustain or increase their investment in mobile technologies during the next 12 to 18 months. These investments must parallel an investment in data and analytical capabilities if the full extent of mobile opportunities are to be exploited, since five petabytes of data are generated every day by mobile phone subscribers, (one petabyte equals one million gigabytes). Organisations should continue to evolve their mobile strategies to accommodate new sources of data as well as relevant design and security requirements that extend beyond the device. Furthermore, any analysis of the mobile data generated must inform the improvement of processes, products and services. Forrester claims that mobile ‘...will remake insurance business models by 2020’.

Mobile will remake insurance business models by 2020
Social

Social networks are evolving into platforms for content creation, idea- and experience-sharing, and self-service. They are also ideal for real-life problem solving, and the rise of mobile and location sharing is fundamentally changing the social paradigm. Integrated business use of social could yield $1.3 trillion per year of new value into the economy, with two thirds of that value from improved collaboration. In fact, such technologies have the power to reconfigure industries from the ground up. Derek White, CDO, Barclays notes that ‘...we fundamentally recognise that the future of financial services lies with entrepreneurs’. Social – and the mindset needed to make it work - is one of the technologies that makes that possible.

Carsten Bruhn, Executive Vice President, Ricoh Europe was talking of technological disruption more generally when he said that ‘...a business must make sure its processes connect people with information, enable greater collaboration and encourage knowledge sharing’. However, his quote accurately sums up what a ‘social-savvy’ business is aiming to achieve. The more significant value proposition of social requires business transformation, and this is widely recognised: 80% of executives worldwide say enterprise-wide collaboration is the key to success.

Effectiveness from data and predictive analytics

‘Life companies have been shockingly bad at using customer data effectively’, suggests Phil Loney, Group Chief Executive, Royal London Group. This is leading to a competitive disadvantage, since companies that have already implemented advanced analytics have shown that profits and productivity can be increased by 5-6% compared to the competition.
McKinsey identifies five broad ways in which big data can create value:

1. By making information transparent and usable at much higher frequency.
2. Allowing organisations to collect more accurate and detailed performance information on everything from product inventories to sick days, and therefore expose variability and boost performance.
3. Allowing ever-narrower segmentation of customers.
4. Sophisticated analytics can substantially improve decision-making.
5. Used to improve the development of the next generation of products and services.

Opportunities are so significant that the EIU suggests that “...for those who can master it, ‘big data,’ will become a business of its own.” By 2020, more than 35% of all data could be considered useful data and increasing volumes are accessible - from existing sources, newer sources (for example, social media), and those that are largely still conceptual (for example, from machine-to-machine communications), that include:

- Insurance business systems
- Social media
- Embedded sensors (for example, vehicle telematics, buildings controls, street furniture or health monitoring devices)
- Insurance company portals
- Mobile apps
- Location intelligence
- Complementary insurance information (for example, building repair costs or business formation data)
Internet of Everything

Cisco estimates that 99.4% of the 1.5 trillion physical objects in the world are still unconnected\textsuperscript{106}. The Internet of Everything (IoE), links people, process, data, buildings and even larger built environments together. The IoE could create $14.4 trillion of Value at Stake for companies and industries over the 2013-2022 period. Cisco CEO John Chambers has repeatedly emphasised that, for an organisation to fully realise the benefits of the Internet of Everything, there will be a demand for cooperation across business units and require CMOs and CTOs to work closer than ever. The Internet of Everything will also demand that traditionally non-technical industries begin to acquire IT expertise\textsuperscript{107}.

Intercloud

The intercloud is a networked and interconnected global cloud of clouds – which allows workloads to migrate from private to hybrid and public clouds\textsuperscript{108}. Some surveys have found an average of 759 cloud services per organisation\textsuperscript{109}. No single cloud can possibly have enough flexible physical capacity and global network access to meet all current and future requirements and, as a result, the complexity (both operational and security-wise) of the cloud has increased. It is likely that an intercloud will become essential for managing multiple clouds\textsuperscript{110}.

The intercloud will also be a key enabler for the Internet of Everything, since the near-infinite scalability and ingrained real-time analytics, together with distributed network and security architectures, will form a platform from which the IoE could grow.

In 2014, some 75% of cloud implementations are set to be hybrid, and the burden of integrating disparate services with each other and with internal IT is time-consuming and damaging to business agility\textsuperscript{111}. Analysts suggest that by 2017 to 2020 we might start to see some serious unification of these services.
### Other key technologies

A range of other technologies could also be used to redraw the insurance business model in an attempt to create more customer centric processes and outcomes.

<table>
<thead>
<tr>
<th>Key emerging technologies</th>
<th>Impacts on Insurance industry</th>
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<tbody>
<tr>
<td>Omnichannel marketing</td>
<td>In a PwC survey, 45% expect ‘distribution destruction’ to occur, where customers buy direct and even form groups to negotiate bulk purchases direct(^\text{112}). In practice this may encourage more individuals to seek out tailor made products and services.</td>
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<td>Gamification</td>
<td>Gartner(^\text{113}) believes that ‘...the application of game mechanics will give Property &amp; Casualty(P&amp;C) and life insurers a new tool to change agent behaviours, create stronger partnerships with agents and generate new sales’.</td>
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<td>Context awareness</td>
<td>Context-aware computing is a style of computing in which situational and environmental information about people, places and things is used to anticipate immediate needs. Context-aware computing could be the single most significant change in enterprises’ customer management relationship strategies during the next five years. Context’s largest overall impact is that it will be used to map the digital and physical worlds together(^\text{114}). Context-aware technologies are expected to make a $96 billion impact on annual consumer spending across the globe by 2015(^\text{115}) and itself be worth $120 billion by 2016(^\text{116}). As contextual aware technologies evolve, they are likely to garner the ability to include a greater array of material. Microsoft Research Asia has floated the possibility of adding a new form of context-detection to devices that infers the mood state of the user themselves. The system is able to infer a user’s mood with 66% accuracy, or 93% when sufficiently familiar with an individual(^\text{117}).</td>
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<tr>
<td>Virtual Work teams</td>
<td>‘Teams of specialised agents could formally partner to provide holistic, multi-line solutions, each bringing unique product expertise and its own network of clients and prospects. At a minimum, they would provide each other with leads, but could also combine into formal sales teams that share clients, revenue, expenses and support. This model exists informally in P&amp;C, but is more prevalent in other advisory services (for example, wealth management).(^\text{118})</td>
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<tr>
<td>Semantic web</td>
<td>‘This next generation of intelligent Web should provide users with ‘context’ to what they are searching for. Using natural language processing, machine-based learning and reasoning as well as other intelligent Web applications, Web 3.0 should enable users not just to travel freely between various communication platforms but also virtual platforms designed in Web. Increasing the dimensions of the Web, Web 3.0 should be kind of a global database... allowing information to be read across different programs on the Web.'(^\text{119})</td>
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What does all this mean for the L&P industry?
4 - The future is here

Future scenarios

Providers may feel they have already undertaken huge changes in recent years, but the pace and significance of future change will be an order of magnitude greater.

Technology is a major driver and enabler, directly in terms of the power of data analytics from the online world, the further development of the Internet, but also in what consumers now use and expect from IT. Change will also be demanded indirectly by what technology enhancements mean for health and longevity, and hence the demographics of the L&P market.

We have painted a picture of just a few of the emerging trends. They may sound futuristic, but they are not far away. Planning to survive and to thrive with this future vision is something for today, not for tomorrow.

We see three potential outcomes for L&P providers, depending on the strategies adopted in response to these key digital technologies:

1. Digital reaction: incremental changes are forced piecemeal upon the provider, leading to lack of both strategic direction and integrated customer focus. Accenture suggests that such erosion of profits would mean companies who find themselves in this scenario can expect to lose 1% to 3% of their ROE.

2. Flatline: those unable or unwilling to adapt the new digital business paradigm and all it entails, will be disrupted and should expect an ROE drop of 5% to 7%.

3. Digital agility: ‘L&P providers will succeed if they see regulatory changes and new business models not as a threat, but as opportunities to partner and grow. The reward will be a +4% to +6% ROE.'
Critical success factors

To address the forthcoming market changes, we see that:

• The risks of inaction are as strong as the opportunities for growth in insurance.

• A reliance on traditional insurance models and legacy technologies is creating exposure to changing risk profiles and a new era of strategic technology, and organisational change is needed to adapt and thrive.

• Insurers need to examine the environment closely and make decisions over where they are going to target growth, choose the correct technological backbone to achieve this and ‘…then align their operating model, governance and capabilities to their chosen business model’.[121]

• Closer relationships with third parties will be needed in order to source the support needed to augment core competencies, both technologically and organisationally.

• Sophisticated artificial intelligence (A.I.) and big data may be able to provide valuable insight on the most effective insurance solutions for a given client.

• Shifting from an ‘inside-out’ culture to one that is ‘outside-in’ and more responsive to customer and employee demands is crucial to future success.
Key questions to ask

L&P providers could do a lot worse than challenge themselves on the following key questions:

• What is our approach to data-modelling and analytics? Is it strong enough to base our business around, and do we have the correct infrastructure in place to use it effectively throughout the organisation?

• With whom can we partner to ensure a smooth technological transition to digital processes?

• How are we preparing for shifting business foundations and are we agile enough to incorporate change into our business model?

• Are we ready to shift from an ‘inside-out’ culture to one that is ‘outside-in’, and be more responsive to customer and employee demands?

• Who, or what, do we see as our main competitors or competitive challenges? How can we adapt or even use these challenges to our advantage?
5 - About aquilaheywood

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The Group’s software solutions – *administrator* and *altair* - are used to administer the records of over ten million individuals across 200 major organisations. These solutions cover the whole range of pension schemes including DB, DC, hybrid, career average, cash balance and stakeholder, as well as a full range of other group and individual products including Group Risk, Individual Protection, SIPPs and Wraps, Income Drawdown and Annuities.

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7 - References*

2. Source: FT, 2014 [http://www.ft.com/intl/cms/s/0/6c327312-6400-11e4-8ade-00144feabdc0.html#slide0](http://www.ft.com/intl/cms/s/0/6c327312-6400-11e4-8ade-00144feabdc0.html#slide0)
16. Source: FT, 2014 [http://www.ft.com/intl/cms/s/0/61162aae-c64f-11e3-9839-00144feabdc0.html#axzz3II5Buxtp](http://www.ft.com/intl/cms/s/0/61162aae-c64f-11e3-9839-00144feabdc0.html#axzz3II5Buxtp)


21. Source: Boston Consulting Group, 2014 [https://www.bcgperspectives.com/content/articles/insurance_financial_institutions_improve_p_c_profitability_premium_growth](https://www.bcgperspectives.com/content/articles/insurance_financial_institutions_improve_p_c_profitability_premium_growth)


28. Source: FT, 2014 [http://www.ft.com/intl/cms/s/0/61162aae-c64f-11e3-9839-00144feabdc0.html#axzz3II5Buxtp](http://www.ft.com/intl/cms/s/0/61162aae-c64f-11e3-9839-00144feabdc0.html#axzz3II5Buxtp)


30. Source: Techcrunch, 2014 [http://techcrunch.com/2014/06/21/will-google-enter-the-insurance-industry/](http://techcrunch.com/2014/06/21/will-google-enter-the-insurance-industry/)


ers-read-the-fine-print/
39. mHealth refers to mobile health—a term used for the practice of medicine and public health supported by mobile devices

78. Source: Venture Beat, 2014 [http://venturebeat.com/2014/04/05/these-three-trends-will-transform-how-employees-use-their-phones/](http://venturebeat.com/2014/04/05/these-three-trends-will-transform-how-employees-use-their-phones/)

79. Source: Community, Lithium, retrieved 2014 [http://community.lithium.com/t5/Science-of-Social-blog/Big-Data-Reduction-3-From-Descriptive-to-Prescriptive/ba-p/81556](http://community.lithium.com/t5/Science-of-Social-blog/Big-Data-Reduction-3-From-Descriptive-to-Prescriptive/ba-p/81556)


83. Source: Accenture, 2014 [http://newsroom.accenture.com/news/uk-life-insurance-customers-prefer-buying-policies-online-but-personal-touch-is-important-for-advice-according-to-accenture-research.htm](http://newsroom.accenture.com/news/uk-life-insurance-customers-prefer-buying-policies-online-but-personal-touch-is-important-for-advice-according-to-accenture-research.htm)


next_frontier_application_context-awareness_mood/)
tureAgents_V_FINAL.pdf](http://www.iaofil.org/Portals/0/Documents/FutureAgents_V_FINAL.pdf)
119. Source: Innovation Management, February 2011
   [http://www.innovationmanagement.se/2011/02/15/me-commerce-to-we-com-
120. Source: Accenture, 2014 [http://click-accenture.com/digital-disruption-in-

*Reference links valid at time of going to print - January 2015*