Being a Disruptor is a Privilege and a Responsibility

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Dr Nigel Wilson
Chief Executive Officer
Legal & General Group
From 1830’s Cyberpunks to the Creators of Digital Cities

FIRST MACHINE AGE:
L&G: formed in a coffee shop in 1836 as a UK Peer-to-Peer company using big data.

- FinTech has disappointed to date, but government policy has driven digital disruption.
- Businesses, consumers and regulators will now accelerate their digital capabilities.

SECOND MACHINE AGE:
L&G: manages digital money, engages digitally and builds digital cities.
L&G: Successful Digital Disruptor in an Analogue Era

- LGIM - AUM has grown from $138bn in 1998 to $1.1trn at June 2015

- Market share in UK Protection has grown from 6% to 24%
<table>
<thead>
<tr>
<th>(i)</th>
<th>Hollowing out of middle management – business “distributes and downsizes”</th>
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<tbody>
<tr>
<td>(ii)</td>
<td>Digital investment is dis-intermediating low paid jobs – higher paid jobs becoming more higher paid</td>
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<td>(iii)</td>
<td>Increasing demand for clean energy – economics are improving and climate change is a real concern</td>
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<td>(iv)</td>
<td>Digital Advice – financial services needs to step up and fill the void – “Robo advice” is key, including welfare</td>
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<td>(v)</td>
<td>Physical is being replaced by Digital – FS industry likes to finance physical assets and regulation prefers physical and analogue</td>
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<td>(vi)</td>
<td>Digital in healthcare will be transformative for our industry – we have to disrupt</td>
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<td>(vii)</td>
<td>The internet of things will be transformational – huge impact on GI business</td>
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Andy Haldane, Chief Economist, Bank of England:
“One interesting solution would be to maintain the principle of a government-backed currency... issued in an electronic rather than paper form. This would preserve the social convention of a state-issued unit of account and medium of exchange, albeit with currency now held in digital rather than physical wallets.”

“In its short life, Bitcoin has emerged as a monetary enigma. What I think is now reasonably clear is that the distributed payment technology embodied in Bitcoin has real potential. On the face of it, it solves a deep problem in monetary economics: how to establish trust – the essence of money – in a distributed network.”
Cloud Computing + Internet of Things + BlockChain = Disruption

CLOUD COMPUTING
Multiple Applications – Big Data Processing for Analytics and Risk Management

INTERNET OF THINGS
Multiple Applications – Telematics, Lending, Leasing and Insurance

BLOCKCHAIN
Unrealised Potential – Decentralised Ledger for Payment Processing

Have corporates learned the lessons?
Can disruption move in-house?
### L&G: A clear and focused strategy for a Divergent World

<table>
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<tr>
<th>GROWTH DRIVERS</th>
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| **AGEING POPULATIONS** | - The world is getting older, people live longer and have not saved enough for retirement  
- Over 60’s have £1.3trn of housing equity, increasingly used to fill this savings gap  
- $10trn of defined benefit liabilities globally, with increasing demand for de-risking solutions |
| **GLOBALISATION OF ASSET MARKETS** | - Asset markets around the world are becoming increasingly homogenous  
- This creates attractive opportunities to grow and internationalise our successful investment management capabilities |
| **WELFARE REFORMS** | - Pressure on public finances is moving the provision of welfare from the state to individuals and employers  
- Shrinking state funding will drive demand for the private provision of protection products |
| **DIGITAL LIFESTYLES** | - Changes in digital customer engagement are presenting both opportunities and challenges to all companies  
- Using digital capabilities to generate scale and efficiency will be key |
| **BANK RETRENCHMENT** | - Retrenching banks create opportunities for investors with long term investment horizons to invest in real assets  
- Real assets provide enhanced risk adjusted returns if executed well |
Digital for Employees: to improve Productivity and Engagement

A group wide seamless, agile and integrated digital workspace where all of our people connect with colleagues, systems and content through a single point of entry – at any location – at any time.
Driving Digital Engagement for Customers and Colleagues

**Rough Guide to Personal Finance series**
- Launched March 2015.
- eBook series to help navigate personal finance.
- Available on desktop, tablet and mobile.
- Distributed through key digital media.
- Tested with our online customer community.

**#MoneyHangout**
- Global first for Google and L&G.
- Live and on-demand video series.
- Over 1,000,000 views of video content, 97% viewing in full edited short clips.

**L&GLive (in beta)**
- Rich content
- Strongly visual
Micro-insurance: 5 million customers in six months in India

“…. mechanism to protect poor people against risk.... in exchange for.... payments tailored to their needs, income & level of risk

Aimed (primarily at developing) world's low income workers, especially those in informal economy.... ignored by mainstream....”

5.6bn people (80% of world population) live on less than $10 a day

Micro insurance offers a scalable, low cost, value for money proposition for these customers that can be delivered directly through the use of digital solutions and retail distribution partners.
Quidcover – using big data and digital delivery

- 4bn people globally with no access to conventional sources of insurance
- 2.7bn people have between $1.25 and $4.00 per day and could afford ultra-low cost micro-insurance
- $40bn of premiums per year, or c.$10 per person per annum

- L&G plan to establish a strong position in the MMI market.
- Quidcover suitable for low SEG customers.
- Many of these potential customers could become increasingly valuable as the middle class grows, acquires assets and has surplus income to save and invest.

Micro-insurance launched in India in 2014

3 minutes to policy issuance
Premium of $3-$5 per month for $3k cover
Successful low cost entry into lifetime mortgages

LIFETIME MORTGAGES

- Re-platform begins
- Acquisition completes 31 March
- Rebrand begins
- Re-platform completes (£480k)
- Rebrand Complete

- Mar 15
- Apr 15
- May 15
- Jun 15
- Sept 15

Applications per week:
- £1m
- £2m
- £3m
- £5m
- £10m

Successful low cost entry into lifetime mortgages
From Execution to Education: Robo-advice

- Size of global asset market: $222 trillion
- Cost and availability of human advice: £125 an hour
- Gen Y accustomed to automation
- Low-fee model wealth management here now, but sub-scale
- Big Data incorporation
- Next: Complex financial planning applications made simple
- Education: Communication and tools

Growth industry: already $19bn AUM as at end 2014. Good for digital customers, challenging for analogue regulators?
### Investment is required to deliver growth

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
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<tbody>
<tr>
<td>(1)</td>
<td>DM economies have over-consumed and under-invested – EM economies have under-consumed and over-invested</td>
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<td>(2)</td>
<td>The tsunami of digital money is moving around the world’s asset markets, bidding up the price of existing assets, then rapidly exiting, causing volatility to increase and returns to fall</td>
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<td>(3)</td>
<td>Public and private investment is too low – we need a change in policy and approach</td>
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<td>(4)</td>
<td>“Fed Watching” by the market is being replaced by “Market Watching” by the Fed</td>
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<td>(5)</td>
<td>Moore’s Law is relentless</td>
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</tbody>
</table>
We continue to drive risk-adjusted returns upwards through direct investments in long dated real assets where the banks have left behind ‘white space’. Investment in housing and regeneration are economically useful for us, for the broader economy and socially useful too.”
Building Digital Cities: part of our £15bn Investment in Infrastructure

“Our Towns and Cities aren’t overbuilt, they’re under-demolished”

£15bn

Direct Investment programme over five years

20:1

Digital infrastructure investment’ multiplier: key to economic growth – a collective responsibility

L&G’s Investment in a £400m Development - Cardiff
L&G: One firm, one set of values, one set of behaviours

<table>
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<tr>
<th>SINGLE L&amp;G LED BY CUSTOMER</th>
<th>A single customer view and one self-service estate at the heart of L&amp;G, across all channels.</th>
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</thead>
<tbody>
<tr>
<td>CUSTOMER ENGAGEMENT</td>
<td>We need to listen, measure and learn. We need to connect and influence. And we need to optimise these opportunities.</td>
</tr>
<tr>
<td>PROGRAMMATION AND AUTOMATION</td>
<td>Insight of customers using programmatic to personalise and target experiences. Providing customer service automation to deliver a high quality, low cost customer experience.</td>
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<tr>
<td>OMNI-CHANNEL</td>
<td>A multichannel approach providing the customer with a seamless experience across all channels and devices, Mobile, Multi-Screen, Tablet, Wearables, IoT.</td>
</tr>
<tr>
<td>GLOBALISATION AND EXTENSION</td>
<td>Building a platform that allows for globalisation and scale.</td>
</tr>
<tr>
<td>INTERNAL CULTURE AND CAPABILITY</td>
<td>Creating an agile and future-focused organisation underpinned by a great employee experience.</td>
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The Second Machine Age: The impact of Digital Disruption

Questions for Policymakers:

- What is productivity in a digital world?
- What are the implications for employment?
- What are the implications for inequality?
- Successful businesses will ride the digital wave. Can government respond? If so, how?

A history to repeat?
Average real wage, year 1 = 100
- Britain, year 1 = 1770
- United States, year 1 = 1970

Years since start

Sources: “Pessimism Preserved: Real Wages in the British Industrial Revolution” by R.C. Allen (2013); US Bureau of Labour Statistics
Is the global macro economy moving to a digital world of zeros?

<table>
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<tr>
<th>Downside</th>
<th>Analogue Economy Paper Money % change</th>
<th>Digital Economy Digital Money % change</th>
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</thead>
<tbody>
<tr>
<td>Economic growth</td>
<td>2 - 4</td>
<td>0</td>
</tr>
<tr>
<td>Nominal interest rates</td>
<td>4 - 6</td>
<td>0</td>
</tr>
<tr>
<td>Real interest rates</td>
<td>2 - 3</td>
<td>0</td>
</tr>
<tr>
<td>Inflation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Normal</td>
<td>3 – 10</td>
<td>0</td>
</tr>
<tr>
<td>Hyper</td>
<td>10 – 30</td>
<td></td>
</tr>
<tr>
<td>Wages</td>
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<td>Hyper</td>
<td>10 – 30</td>
<td></td>
</tr>
<tr>
<td>Currency</td>
<td></td>
<td></td>
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<tr>
<td>Fixed with “crashes”</td>
<td></td>
<td>Volatile</td>
</tr>
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“We cannot solve our problems with the same thinking we used when we created them.”

- Albert Einstein
“Insurance has a powerful social purpose. We make a promise to our customers that we will be there to stand behind that promise when disaster or tragedy strikes.

Our clear aim is to be a force for good in society, make every day matter for our customers and colleagues and live by the promises we make in our high quality products.”
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THANK YOU.