

# Distribution for the 21<sup>st</sup> century: embracing the digital revolution

## Waiting for Godot: Digital Disruption in European Financial Services

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**Group Chief Executive &**  
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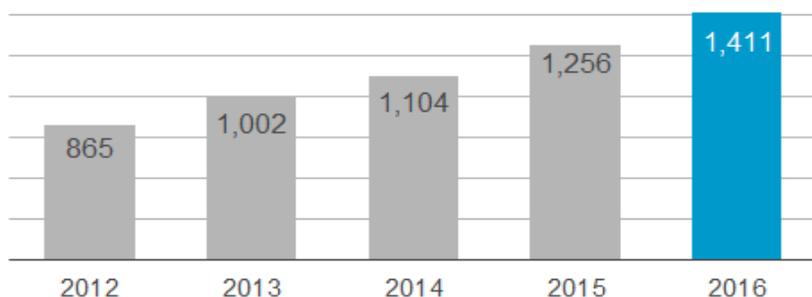
## Legal & General clear and consistent strategy: Excellent execution

Growth drivers	2016 achievements
<b>Ageing demographics</b>	<ul style="list-style-type: none"> <li>• LGR record transactions £8.5bn, up 190%, including 6 US pension de-risking transactions</li> <li>• £620m Lifetime mortgages sales, target £500m, voted best equity release / lifetime lender</li> <li>• Agreement with Aegon to offer individual annuities to its vesting book of DC customers</li> <li>• Solutions assets of £412bn, up 22%, UK market leader with 45% share</li> </ul>
<b>Globalisation of asset markets</b>	<ul style="list-style-type: none"> <li>• 252 US clients with £118.5bn assets, 4 of top 5 US DB pension funds</li> <li>• Successfully winning US DC mandates, net flows £9.4bn (2015: £6.3bn)</li> <li>• LGIM distribution agreements in Japan with Nikko Asset Management and Meiji Yasuda</li> <li>• Partnering with Dutch investors in 'Build to Rent'</li> <li>• Partnering with global investors in SME finance (Pemberton)</li> <li>• LGIM total AUM of £894bn, up 20%, International AUM of £177bn, up 45%</li> </ul>
<b>Creating real assets</b>	<ul style="list-style-type: none"> <li>• £10bn of group-wide direct investments, up 39%</li> <li>• £940m 'Build to Rent' housing pipeline with new homes in Salford, Bristol and Walthamstow</li> <li>• UK infrastructure investments in London Gateway Port, Stratford, and Newcastle</li> </ul>
<b>Welfare reforms</b>	<ul style="list-style-type: none"> <li>• Market leading UK retail protection business, over 25% market share</li> <li>• UK DC assets £57.1bn, up 24%</li> <li>• DC bundled provider for Tesco Plc, with over 200,000 employees, more to follow, 50bps price cap</li> <li>• 2.2m customers in over 9,000 schemes</li> </ul>
<b>Technological innovation</b>	<ul style="list-style-type: none"> <li>• Retail protection direct sales up 7%, General Insurance direct sales up 20%</li> <li>• My Account: nearly 900k users with c.450k new customers signed up in 2016</li> <li>• Investment and partnership with Smart Pension, a Fintech auto-enrolment pension provider</li> </ul>
<b>Today's capital</b>	<ul style="list-style-type: none"> <li>• SME debt finance, Pemberton's final close at €1.2bn, with 80% external investment</li> <li>• SME equity finance, £150m venture with Woodford Investment Management &amp; British Business Bank</li> </ul>

## Legal & General consistently delivering strong results

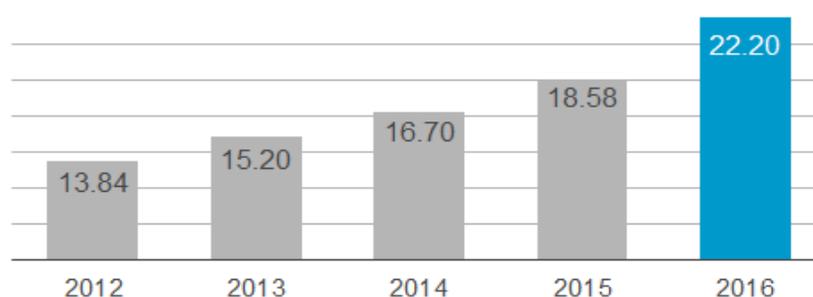
### Growing net release from operations (£m)

**13%** CAGR



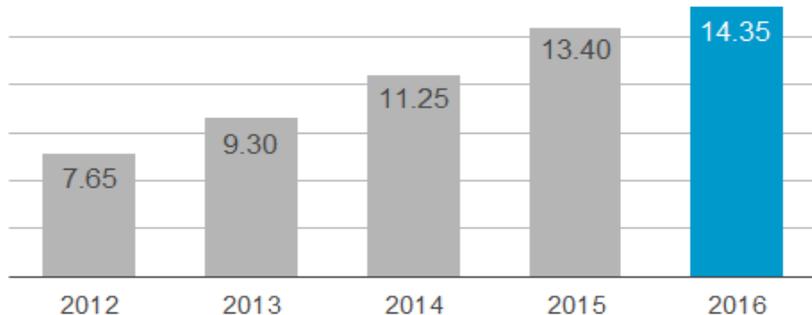
### Consistent earnings per share growth<sup>1</sup> (p)

**13%** CAGR

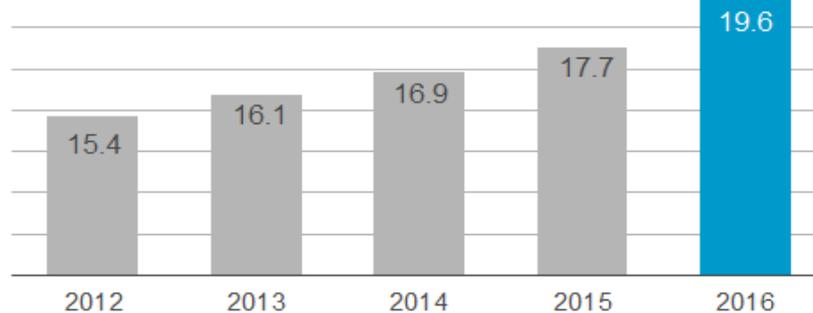


### Increasing dividend per share (p)

**17%** CAGR



### Increasing return on equity<sup>1</sup> (%)



1. 2015 represents adjusted EPS and ROE and excludes a £25m net loss arising on the disposal of Legal & General France and Egypt. Unadjusted EPS and ROE is 18.16p and 17.3% respectively. 2016 represents adjusted EPS and ROE and excludes a £60m loss arising on the disposal of Cofunds and Suffolk Life. Unadjusted EPS and ROE is 21.22p and 18.8% respectively.

## Legal & General technology as a core principle: Six key trends

“What we are doing”	2016	2017 onwards
<b>Robotics</b>	<p><b>Deployment of robotics across high volume and repeatable processes resulting in:</b></p> <ul style="list-style-type: none"> <li>•Increased processing speed</li> <li>•Efficiency improvements of c. 8%</li> <li>•99.9% accuracy</li> <li>•Cost savings</li> </ul>	<p>Continue to build on our success with robotics and exploit broader conversational commerce capabilities such as webchat and chatbots to:</p> <ul style="list-style-type: none"> <li>• increase automation</li> <li>• reduce call times</li> <li>• extend self-service capabilities</li> </ul>
<b>Big Data</b>	<p><b>Usage of Big Data to provide a guaranteed quote based on six simple questions.</b></p> <ul style="list-style-type: none"> <li>•Accuracy of pricing improved</li> <li>•Call times reduced by 60%</li> </ul> <p><b>Created improved sources of asset and liability data to deliver same day pricing and economic capital modelling</b></p>	<p>Extend our use of real real-time Big Data to enable automated medical underwriting and to deliver further improvements in asset and liability pricing and back-book management</p>
<b>Platforms</b>	<p><b>Further improvements to legalandgeneral.co.uk and My Account</b></p> <ul style="list-style-type: none"> <li>•Site visits increased by 30% to 12.7 million</li> <li>•My Account visits increased to 2 million</li> <li>•My Account functionality have helped our customers to complete over 509,000 transactions</li> </ul>	<p>Build out My account to create personal digital ecosystems for consumers including insurance, savings and retirement choices</p> <p>Advice applications</p>
<b>Cloud</b>	<p><b>Increased flexibility through use of Cloud:</b></p> <ul style="list-style-type: none"> <li>•Extended our analytics and actuarial modelling performance</li> <li>•Reduced costs of storage</li> <li>•Enabled communication and collaborative tooling for an agile workforce</li> </ul>	<p>Extend our use of cloud-based solutions to improve agility and further support the use of technology to innovate</p>
<b>Artificial Intelligence Blockchain</b>	<p><b>Watching brief Advice</b></p>	<p>Explore commercial opportunities</p>

## Who will be the winners?

To date Fintech has been a disappointment

- Compare with books, music, travel, hotels, retailing, taxi's, advertising
- Who is the best insurance tech business?
- Who is the best pension and investment tech business?

“Disruptive Capital” is finally flowing into the sector, but no obvious winners are emerging. “Lots of activity, little progress”

The car industry is being “disrupted” by new capital (Tesla) and new entrants (Google, Intel), but existing players are responding effectively – the driverless car is already here, £700 billion market by 2030

Will our industry be like the car industry, (a battleground between incumbents and new entrants) or retail / music / advertising where new digital entrants are the winners?

Winners will emerge with large market shares, e.g. LGIM in LDI (45% market share), LGI Retail Protection (26% market share)

## Tech: Market Caps and strategy

Company	Market Cap (\$ billion)	Strategy
Apple	730	Apple pay (success)
Google	590	Driverless cars Google Ventures (success), Insurance (?)
Facebook	400	Video and TV, on-line shopping (success)
Amazon	410	Market leaders in Cloud (success)
Microsoft	500	Moving into digital health
Tencent	260	Significant digital presence in FS (success)
Alibaba	260	Significant digital presence in FS (success)

Note: Tesco (£15b), Sainsbury's (£6b), Morrison's (£5b), M&S (£5b) = £31b = \$38b < 10% of Amazon

## Industrial scale and leading edge technology is required to win

1. The western super tech firms Apple, Google, Facebook, Microsoft, Amazon could play a major role in disrupting pensions, investments and the life industry. To date they have chosen not to, is this likely to change?
2. The most developed new business models in Fintech are in Asia – not in the West
  - Alibaba (Ant)
  - tencent (WeChat)
  - Ping An (Zhong An online insurance, Good Doctor)
3. European firms are playing no material role in becoming super tech disruptors – Europe has no equivalent of the US or Asia super tech firms

# Spotlight on Ant

“Bring small and beautiful changes to the world”

PAYMENT		WEALTH MANAGEMENT		FINANCING		INSURANCE	CREDIT REFERENCE
 <b>451mn</b> Annual Active Users <sup>(1)</sup>		<b>152mn</b> Annual Active Users		  <b>SME Loans</b> <b>3mn<sup>(4)</sup></b> Cumulative Users		 <b>380mn</b> Cumulative Users	 <b>130mn<sup>(4)</sup></b> Cumulative Users
<b>153mn</b> No. of Daily Avg. Transactions <sup>(2)</sup>		 <b>AUM RMB 760bn<sup>(4)</sup></b> 3-Yr Operation		<b>Charles Schwab</b> <b>CITIC Securities</b> 9.9mn active users    7mn active users		<b>China Life</b> 400mn cumulative users	<b>People in credit reference system in the US</b> ~250mn
<b>PayPal</b> 180mn active users <sup>(1)</sup> 16mn daily average transactions <sup>(3)</sup>		<b>China Merchants Bank</b> 38mn cards in circulation		<b>China Minsheng Bank</b> 4.5mn cumulative borrowers		<b>Ping An</b> 110mn cumulative users	
<b>MasterCard</b> 1.4bn accounts <sup>(1)</sup> 180mn daily average transactions <sup>(3)</sup>		<b>Lufax</b> 3.6mn active users					
<b>Visa</b> 2.2bn accounts <sup>(1)</sup> 260mn daily average transactions <sup>(3)</sup>							

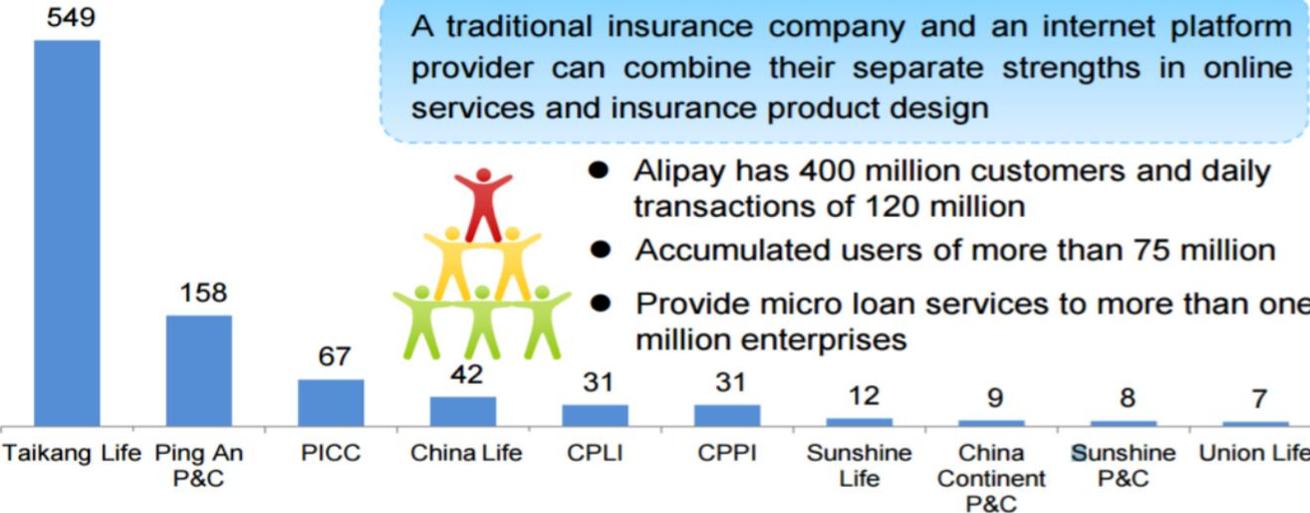
## 2011-2013 annual website visitors for insurance companies (million)

“Alipay has over 450 million registered users and over 200 financial institution partners, offering payment services for around 10 million small and micro merchants, with its service offerings ever expanding”.

A traditional insurance company and an internet platform provider can combine their separate strengths in online services and insurance product design



- Alipay has 400 million customers and daily transactions of 120 million
- Accumulated users of more than 75 million
- Provide micro loan services to more than one million enterprises



**>\$100bn**  
Prediction of ‘soon’ future worth



26/01/2017

Moneygram agrees to merge with Ant Financial

# Spotlight on WeChat

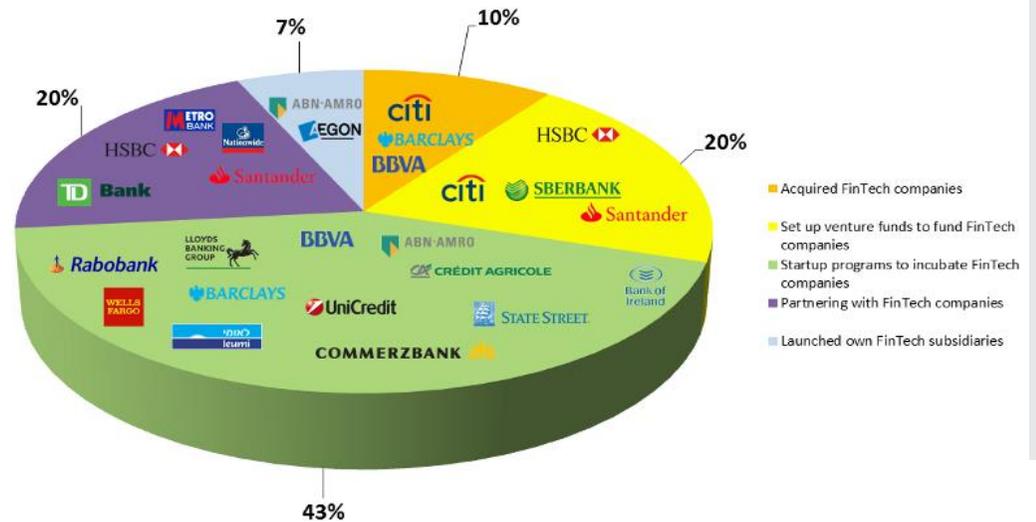


**Tencent 腾讯**

- Release date January 2011
- Average amount of time Chinese adults spend on WeChat daily: over 40 minutes
- 83% of WeChat users purchase products online
- 93% of the population in tier 1 cities in China use WeChat
- 60% of global millennials use WeChat
- Number of users for WeChat Payments: 200 million
- 300,000 offline stores that accept WeChat payment
- WeChat users consumer \$15.3bn US in 2014
- McDonalds was the first major company to implement e-commerce on WeChat
- 10,000 WeChat advertisers
- 29% of global internet users use WeChat
- 21% of mobile users in India use WeChat monthly
- 5 million WeChat users in South Africa
- 3 billion webpages shared daily on WeChat Moments
- 10m WEChat investment fund users
- 30 cities in China have WEChat Moments local ads support

**1.1 billion accounts**  
**Estimated value \$83.6bn**

**Tencent 腾讯**



## Spotlight on Ping An Online *Aggressively building a digital ecosystem around all essential living scenarios*

### Key platforms

#### Auto



#### Housing



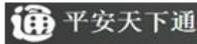
#### Health



#### Games



#### Finance



Personal TOA<sup>1</sup>

Bank TOA<sup>1</sup>

Financial TOA<sup>1</sup>

Zhong An Insurance



- No.1 insurance company globally by market cap
- 1 in 10 Chinese people are a Ping An customer
- Strives to become a world leading FS provider by following the concept of “Driven by technology, finance can serve life better”
- “Expertise Makes Life Easier” brand experience through its four business sectors of insurance, banking, asset management and internet finance
- “One Customer, One Account, Multiple Services and Products” - In 2014/2015 began building large online userbase with goal to build consistent traffic & large user base via multiple platforms that tap in to ‘everyday’ life (“auto”, “housing”, “health”, “sports gaming” and “eatery”)
- Founded China’s 1st online insurance company Zhong An in 2013 in partnership with Alibaba. Planning IPO with potential valuation of \$8bn. More than 200 types of products. 3.6billion policies held by 369 million customers.
- Founded Good Doctor in April 2015 – China’s largest unicorn: worth \$3bn with >77m users and more than 50,000 doctors.
  - Free clinical diagnosis, advice and online bookings.
  - Online consultation via text, pictures and videos.
  - A microblog forum for health topics.
  - Online store: drugs, healthcare products, cosmetic, digital & physical gift cards for medical services such as health exams and gene testing.

**250m online users, increase of 76% in year 2015 alone**

**“Three A” approach to service: Anytime; Anywhere; and in Anyway**

## There have been many changes in the UK Financial services industry, many within unintended consequences

In the Life and Pensions sector:

1. RDR – created an advice gap in distribution, expensive implementation, weak customer outcomes
2. Pensions Freedoms – increased the advice gap, too expensive for customers
3. FAMR – promising start, but is it too limiting in its ambition?
4. Fintech beginning to change social behaviours – digital mortgage brokers (Habito; sub scale)
5. Low interest rates – negative nominal yields – what is the impact? (£100k challenge)
6. Distribution channels are beginning to change, too slowly?
7. Auto enrolment – success

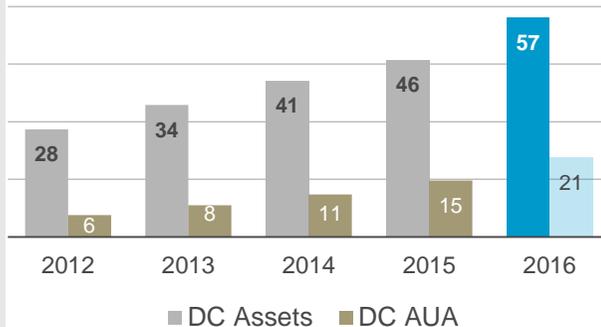
**UK regulator driving customer protection: who's driving customer empowerment?**

# LGIM: Continued growth in DC pensions and Retail business

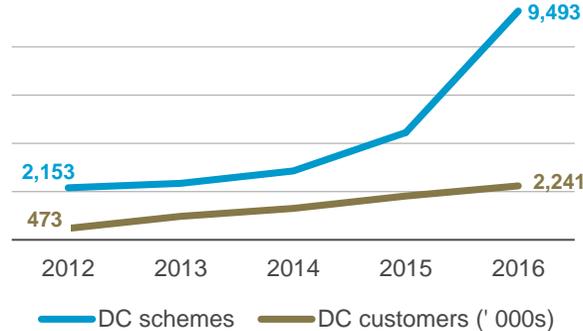
## DC AUM and AUA growth (£bn)

### DC AUM

19% CAGR

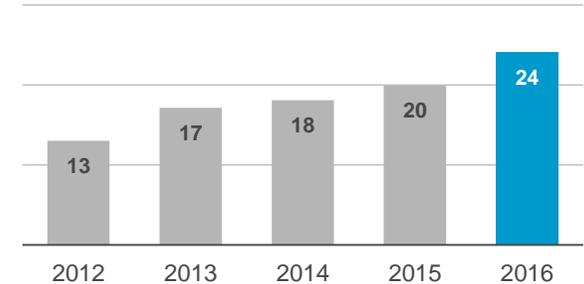


## DC client growth



## Retail AUM (£bn)

17% CAGR



### Market leading capabilities for UK DC clients:

- Strong growth in DC assets, up 24% to £57.1bn
- Number of pension schemes serviced has more than doubled to over 9,400
- Building presence in SME market following investment in Smart Pension, an auto-enrolment platform
- Leadership in product development (Multi-Asset Funds, Pathway Funds, Future World Fund)

### Accelerating growth in our Retail business:

- Robust performance in a challenging market, with positive net flows every month and net new business of £1.4bn (2015: £1.2bn)
- AUM increased to £24.1bn
- Continue to build our offering in Index, Multi-Asset and Active Specialties with increased focus on sales through wealth managers

## Existing players recognise that markets are now going to be disrupted

Results of 2016 Digital Business Global Executive Study<sup>(1)</sup> -

- 93% of FS firms strongly agree that the objective of their digital strategy is to improve customer experience and engagement
- 90% of respondents agreed that digital technologies are disrupting the industry to a great or moderate extent
- Only 46% of FS respondents agree or strongly agree that their firms are adequately preparing for digital disruption

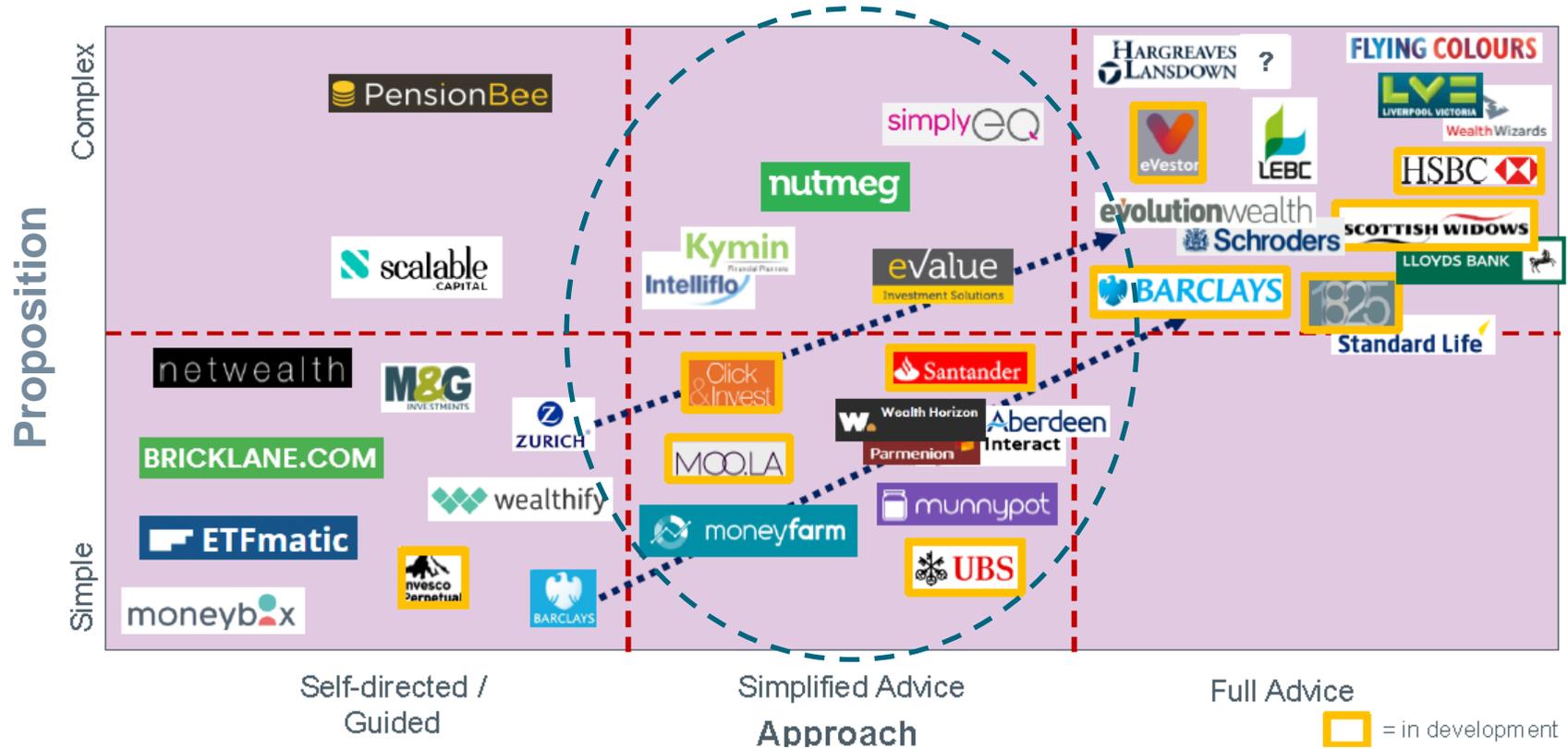
(1) Fifth annual study by MIT Sloan Management Review and Deloitte Digital

## Incremental changes to our industry are already in the “hopper”

- Mobile payment (including micro payment)/withdrawal facilities
- Mobile-first (including tablet) development – user experience will increasingly focus on “getting it right” for the mobile/tablet rather than desktop, with “building a relationship” as important as the transactional capabilities and biometric security
- Social media is important and a key part of a customer communications and data source
- Portfolio aggregation of a customer's entire holdings is happening, but too slowly
- Data is a core corporate asset: Data mining and customer analytics will inform the future e.g. Amazon in retailing

**Incremental positive changes but not transformational or with sufficient velocity**

# UK Digital Propositions – 2017: Long term winners?



**New digital players disrupting traditional advice market**

## The size of the advice gap in the UK is a market failure

- There are no longer enough advisors to service every customer in the UK
- Millions of adults unable to access the financial services at key moments in their lives or to help them achieve their goals and ambitions
- Responsibility is moving from the State to the employer and the individual – recognition?
- Providing advice rather than help or guidance is increasingly important to customers
- But...the typical “liquid assets” requirement for a customer to receive face to face financial advice is now typically £75k+, which is out of reach of the mass market and also mass affluent population
- Just 8% of UK adults state that they would pay more than £100 per hour for financial advice; in the UK the average adviser fee is £150+ many charge £250+ an hour

**Scalable low cost solution required for the mass market: AI is the answer**

## Robo advice is driven by Artificial Intelligence and Big Data but it's happening too slowly

- Our industry needs to massively develop its understanding of the impact of Robotics, Big Data and Behavioural Science
- Financial Service industry needs greater focus on engagement and empowerment of our customers
- Enormous opportunities exist but pace needs to dramatically increase

## Longer term evolution of the financial services landscape

- Social behaviours are changing
- Increasing use of aggregator services in everyday lives (Spotify, Facebook, AirBnB, comparethemarket.com etc..)
- Amazon, Facebook, WhatsApp, Messenger are good examples of customer-centric platforms, which could disrupt the market
- China, is specialising in new disruptive technologies and is scaling up quickly to bring new challenger banks to the market



- WeChat (China) have tremendous customer data and will increasingly be able to monetise financial services
- The combination of big data, IoT, AI, cloud, platforms and mobile are facilitating transformational ecosystems for the 21<sup>st</sup> century

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