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Challenger Banking

October 2016

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INTRODUCTION

Why challenger banking?



Financial institutions today are facing rapid and irreversible changes across technology, customer behaviour and economy. The combined power of these three drivers is amplified by the fact that they are often closely intertwined. Most importantly the seismic impact of technology, in particular, is altering the cost structure of the banking industry in such a way that what once was a barrier to new entrants has suddenly become a bottleneck for incumbents.

Gaining momentum quickly

Since the financial crisis of 2008-09, the banking sector, especially in the developed markets, suffered a heavy loss of trust and is undergoing incremental reform ever since. Lower interest rates, a banking culture acting as an impediment to fast innovation and the demand from customers for a Google/Facebook-like simplicity in banking experience led to the creation of an entrepreneur-led banking products revolution. Fast forward to 2016 - a new

breed of technology-driven and customer-centric financial institutions, aptly named challenger banks, are bidding to transform the banking landscape as we know it.

The UK itself has witnessed over 30 challengers applying for a banking licence in the past four years, but few of these challengers will get to the launch – just 8 banking licences were granted by regulators between 2010 and 2015 and a mere 20 have been granted in the last 40 years. In May 2016, Mashaven Bank got the first banking licence of the year followed by Starling Bank in July and Monzo Bank in August. The trend is similar in other parts of the world with the US, Mexico, Germany, France, China, Singapore and Australia launching challenger banks in increasing numbers. Challenger banking is thus fast becoming one of the largest categories by interest, and innovation, within fintech.

Setting the tone

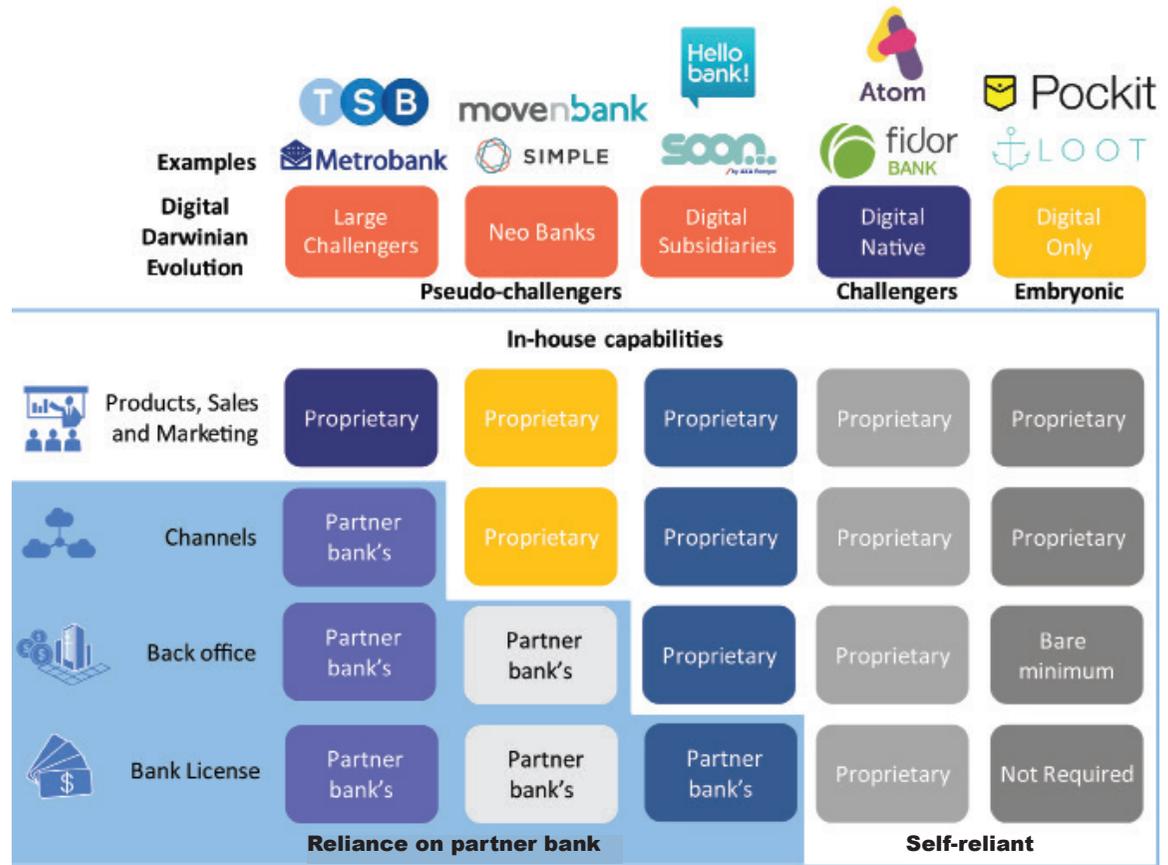
The umbrella of ‘challenger banks’ includes multiple personalities of apps, websites, branches and a combination of these.

Embryonic Challengers: Fintech innovators on the banking value chain who operate only through mobile apps in partnership with traditional banks or other (bigger) challenger banks.

Real Challengers (or, just, challenger banks):

Non-existing banks which have obtained a banking licence in the last 3-5 years or are in the process of procuring a banking licence AND has digital as the only or predominant channel for engaging with customers.

Pseudo Challengers: The digital subsidiaries, digital partners (neo banks) and digital startups of existing banks which engage with customers through both branch and digital channels.

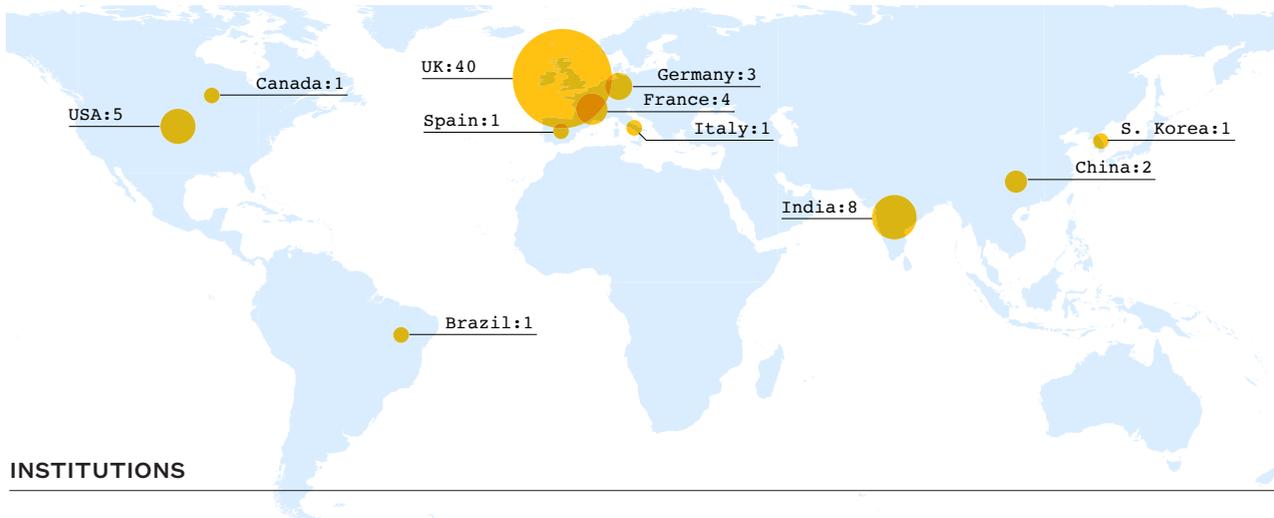


The business model and technological model of challenger banks have been built around customer centricity, regardless of their approach to licensing and partner bank relationships

The Definition Real, Pseudo and Embryonic challengers

Challenger Banks

LOCATIONS



INSTITUTIONS

EU/USA Abacus, Aldermore, Almond Bank, ASDA Money, Atom Bank, BankMobile, British Business Bank, Burnley Savings and Loans, Cambridge & Counties Bank, Cetelem, Charter Savings Bank, Civilised Bank, Compete Nickel, Coombs⁴, Ffrees, Fidor, Fidor Bank UK, First Direct¹, Firstsave², GoBank, Hampden & Co. (previously Scoban LLC), Hampshire Trust Bank, Harrods Bank, Hello Bank⁵, Lintel Bank, Loot, M & S, Masthaven, Metro Bank, Monese Banking, Monzo, Moven Bank, No. 26, OakNorth Bank, OneSavings Bank, Osper, Paragon Bank, RCI Bank, Sainsbury's, Secco Bank, Secure Trust Bank (STB), Shawbrook Bank, Simple⁷, solarisBank, Soon Banque⁶, Starling, Tandem Bank, Tesco, TSB Bank, United Bank UK, Virgin Money, Williams & Glyn³

OTHER Aditya Birla Nuvo, Airtel M Commerce Services, Borrowell, Cholamandalam Distribution Services, digibank⁸, FINO PayTech⁹, Freasy¹², imaginBank¹³, Instabank, Kakao¹¹, Koho, Mybank, National Securities Depository, NuBank, Nutmeg, PayTm, Reliance Industries¹⁰, Tyro, Vodafone M-Pesa, WeBank, Widiba¹⁴

PRIMARY SERVICE

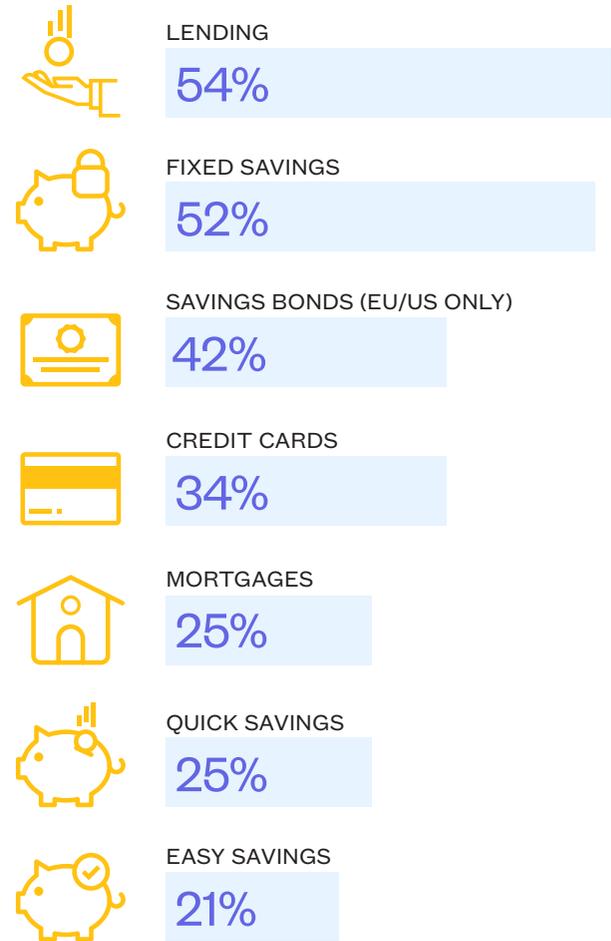
- Digital Banking (26)
- Savings/Lending (15)
- Other (10)
- Generic Banking (15)
- Mortgages (4)

BANKS LAUNCHING SUBSIDIARIES



- 1 HSBC
- 2 First Bank of Nigeria
- 3 RBS
- 4 S&U
- 5 BNP Paribas
- 6 AXA
- 7 BBVA
- 8 DBS
- 9 JV with ICICI Bank
- 10 JV with State Bank of India
- 11 JV with Korea Telecom
- 12 Credit Agricole
- 13 CaixaBank
- 14 Banca Monte dei Paschi di Siena

SERVICES OFFERED BY INSTITUTIONS



INSIGHT 1

Challenger banks: Raison d'être.



Data

The dynamics around banking penetration, customer confidence in banking and smartphone penetration presents diverse opportunities for challenger banks across the world.

A shift in demographics

The millennial generation in the US is now 92M compared to 77M of baby boomers and in the UK it is 13.8M - this is a population of consumers who are digital natives, socially hyperconnected and increasingly concerned about financial stability due to their early years being spent in a drawn out financial crisis. This is a population that is more comfortable with on-demand services like AirBnB and Uber and simplified experiences like Google. This fundamental shift in demographics along with economic drivers like low interest rates, and the desire for a simplified, intuitive, on-demand and mostly free customer service is leading this group to explore options beyond traditional banking.

Customer confidence in banking

In the developed market, especially western Europe and the US, the trust of customers has taken a beating post the financial crisis, with most of the countries showing low and very low confidence in the banking industry with UK - 33%, France - 33%, Germany -

40%, Italy - 24% and USA - 37%. In contrast most of the Asian countries have high confidence in their respective banking industries with Thailand - 89%, Malaysia - 86%, Philippines - 77%, China - 72%, and India - 70%. Some of the and eastern European countries also exhibit decent confidence in the banking industry with Malta - 72%, Luxembourg 66%, Estonia - 55% and Czech republic - 50%.

Smartphone penetration

Most of the developed economies across the world have high and very high smartphone penetration with Singapore - 92%, South Korea - 82%, UK - 75%, USA - 70%, and Germany - 65%. Some of the emerging economies are also showcasing high smartphone penetration with Hong Kong - 63%, China- 58%, and Israel - 57%.



Trends

The reasons for emergence of challenger banks are multi-fold and also dependent on the regions they belong to, given the region specific problems that these challenger banks are trying to solve.

In the developed markets, challenger banks are gaining prominence due to the underlying

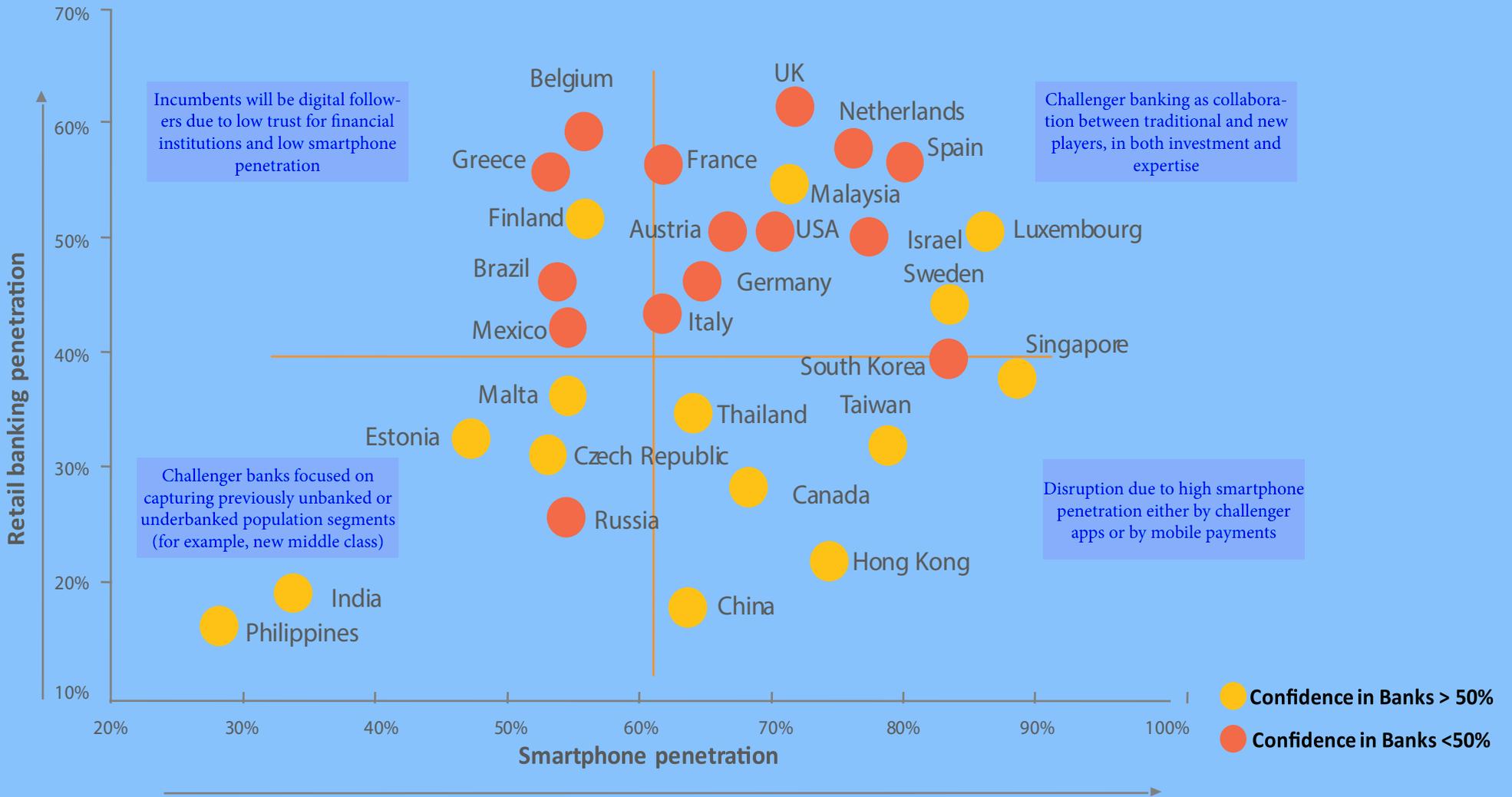
inefficiencies of the incumbents in serving the customer in the best possible and transparent manner. The trust and confidence in the existing banking establishment have been seriously eroded post the financial crisis. This erosion of confidence creates space for competitors to enter or to gain market share by offering a superior service, or by simply being available to customers (and offering the proverbial ear).

Emerging markets are looking at challengers as a medium to accelerate banking innovation as well as financial inclusion and wellness. As mobile penetration is increasing in the emerging markets, banks utilising digital channels to onboard, engage or serve customers evolve to become an important medium for financial inclusion initiatives.



Insights

In developed markets with high smartphone and retail banking penetration, challenger banks will collaborate with incumbents to restore customer trust in banking by improving customer experience and by extending the benefits of lower operating costs directly to customers. The countries with high smartphone penetration and low banking reach will see challengers leading financial inclusion initiatives.



Geographic reasons for challenger banking evolution

INSIGHT 2

Geographic presence of challenger banks



Data

Most of the innovation around fintech, and challenger banking in particular, have happened with heavy support from regional hubs, country regulators and city-centred community groups.

Institutional

Project Innovate was launched by the Financial Conduct Authority (FCA) in as early as 2014 to support regulation for innovative businesses. Singapore launched a £100m financial sector technology and innovation scheme while the Australian Government announced a £500m national innovation and science agenda. Chinese regulators have similarly supported the setup of online-only banks (Tencent-backed WeBank and Alibaba-backed MYbank).

Capital availability

The UK generated £524m of fintech investment in 2015, while the US raised £3.6b in California and £1.4b in New York in 2015. Beijing's venture market has increased from £1.0b of VC investment in 2012 to £8.6b in 2015, and is now second only to San Francisco. Shanghai and Shenzhen Exchanges listed a total of 1,460 companies in the last decade, while NYSE and

NASDAQ witnessed 1594 listings. In Singapore, MAS supports start-ups with a £100m dedicated fund and other schemes such as SPRING SEEDS Capital.

Enabling infrastructure

With respect to financial expertise, the UK has an unrivalled lead, employing 1.2m people in the financial services industry and the government STEM policy paper offers 10 years of tax-free operations for new or expanding businesses by universities or colleges. Graduates of Australian universities with qualifications in STEM and ICT will receive extra points under the points-tested skilled migration programme to qualify for a permanent work visa (to be implemented).

Adoption propensity

China has the world's largest population, accounting for 20% of the total world population, which is also increasingly digitally active, with strong potential to adopt innovative fintech products. Almost 15% of Chinese retail purchases are online. On the basis of the EY FinTech Adoption Index, adoption is highest in Hong Kong (29%), followed by the US (17%) and the UK (14%). The UK has the largest number of

SMEs in Europe (5.2m), followed by Germany while the US and China dominate with 28m and 42m SMEs respectively.



Trends

Second to the UK, Singapore is increasingly active in policy and benefits to make it an attractive fintech hub to set up a business. While gaining traction, Singapore's fintech initiatives (similar to Australia) are relatively new and need time to reach the UK's level of maturity. Policy landscapes in the US, Hong Kong and Germany are viewed as more complex and conservative.

Hong Kong still has a nascent seed funding market, but with increased focus from government. The higher level of FinTech investment in the US stems partly from the presence of a well-established venture capital (VC) sector, which invests in FinTechs of all sizes, and the strength of the US-listed markets.

When a US entrepreneur exits or sells, he'll just go again and reinvest in another business. In the UK, he'll buy a house" - EY FinTech Report with HM Treasury

Singapore and Hong Kong have the most accommodating skilled immigration regimes so far, based on the speed, simplicity and flexibility of visa programmes. The enabling infrastructure in the US and the UK (particularly London) is very strong due to high availability of technical, entrepreneurial and financial talent coupled with the high smartphone penetration and entrepreneur friendly immigration initiatives.

The large SME market in the UK, Germany and USA are relatively open to innovative solutions resulting in an opportunity for challengers to innovate around products and services for this critical and highly underserved segment.

China, with its large, highly digital consumer base, is open to online solutions and a dynamic environment with the presence of tech players like Alibaba is creating a suitable ground for the success of challenger banks. Both Beijing and Shanghai have emerged as top five hotbeds for VC investment in 2015. Regulators are supportive of tech firms in bringing fintech offerings to market and state-owned institutions also play a role in providing capital to financial innovation.

 **Insights**

The UK holds the first mover advantage as a home for challenger banks, but new geographies are gaining ground with support from government, regulators, investors and entrepreneurs. The US, Singapore and Australia, in particular, are actively competing to create best-in-class financial innovation ecosystems and are increasingly progressive in their use of government and regulatory policy to support challenger banks.

China is beginning to specialise in promising disruptive technologies, and is scaling up quickly bringing new challenger banks to market as a conduit for financial inclusion for consumers and serving the highly underserved SME market.

Parameter	Attributes	UK	US	DE	AU	HK	SG	Top Rank Countries
Institutional Environment	Regulatory Regime							UK Singapore
	Governmental Support							
	Taxation laws							
Capital Availability	Angel Investors							USA UK
	Venture Capitalists							
	Stock Exchange Friendliness							
Infrastructure Enablement	Technological Innovation							USA UK
	Smartphone Penetration							
	Academic Institutions							
Adoption Propensity	Consumer Readiness							UK USA
	SME Demand							
	Financial Institution Partners							
Overall Readiness		1	2	4	6	5	3	

 Great  Good  Fair

Regional advantages impacting challenger banking innovation

INSIGHT 3

A cost-centric business model



Data

Customer segment attractiveness and market acceptance of products

According to CMA, 57% of consumers in the UK have been with their account provider for more than 10 years and 37% for more than 20 years. Less than 3% of customers (1.03m) switched their personal current account in 2015 and just 16% looked at alternative accounts.

Challenger banks have issued 32% of the UK's business mortgages and charges in the first half of 2016. Challenger banks held over 50.3% of mortgages for utilities and energy companies and 46.2% for healthcare. In 2015, Aldermore reported an impressive growth in Asset Finance (+29%); SME Commercial Mortgages (+50%); Buy-to-Let (+18%); Residential Mortgages (+42%).

USA-based LendKey offers the refinance option for student loans with lower fixed APRs in the range 3.25% – 8.22%, and variable rates starting as low as 2.14%. As of January 2016, over 40,000 people have used its services. Germany-based student lending firm Future Finance received 37,000 applications upto March 2016 and has seen a student loan growth of over 900% year-on-year.

Asset-light, digital channels and operational excellence

In terms of CTI (cost-to-income) ratio, OneSavings Bank (OSB) leads the field, reporting a CTI ratio of 26% in 2015 with the bank's efficient and scalable low cost offshore back office. Use of offshoring for 50% of full time employees has resulted in a 10% CTI benefit for the challengers. The focused IT infrastructure enables the challengers to achieve a 6% lower CTI ratio compared to big banks. Challenger banks without branches run their distribution channels typically at 6% of their overall cost base, compared to an average of 27% for the retail banking industry. This differential gives an 18% CTI benefit compared to banks with extensive branch networks.



Trends

Despite the current account switching scheme in the UK, challenger banks have not been able to wean customers off the big banks and the monetary onboarding rewards and better interest rates have also failed to lure customers to switch their accounts. Challengers have been able to get good traction in various lending segments. The student lending has been a key market for challengers in the US while the student loan refinance and maintenance loans are emerging as good trends in the student loan segment in the UK. The underserved SME segment, especially in the UK and the US, has been embracing the innovative offerings from challenger banks, especially in business mortgage and invoice financing. Mortgage lending is also seeing disruption from challenger banks in terms of improved turnaround time and better rates with innovative offerings for first-time purchase, buy-to-let and mortgage refinancing.



Insights

Unlike traditional banks who have extensive marketing and operations strategy to drive their product-centric business model, challenger banks tend to be asset-light and leverage customer data and technology to drive their customer-centric strategy with simpler product sets, particularly those focused on niche product areas. Currently, challenger banks are using the Bank of England's funding for lending scheme (FLS) in the UK and securitisation in the US to target profitable lending niches and fulfill the needs of unserved or underserved customer segments including student lending, SME lending and some categories of mortgage lending.

INSIGHT 4

Niche target segments within challenger bank lending



Data

Student Lending

The UK and US student debt has spiraled out of control, rising from \$200 billion in 2003 to \$1.4 trillion in 2016. The cost of a 4-year undergraduate degree has increased and the average tuition fees now comes close to \$9100 a year at public institutes and \$31,200 at private institutes in the US. In the academic year 2014-15, the non-federal loans in the US, which are offered by financial institutions amount to 9% of the total originations.

SME Lending

There were a record 5.4 million private sector businesses at the start of 2015. SME Lending declined by 20% since the European Union began implementing Basel regulations. On average, credit bureaus in the EU only have credit information on 67% of SMEs, reducing SME loans.

In the US, according to the January 2015 Biz2Credit Small Business Lending Index, the largest banks (>\$10 billion in assets) approved 21.3%, community banks approved 49.6% and alternative lenders approved 61.6% of loan applications in January 2015.

Mortgage Lending

The Bank of England stated that mortgage originations jumped to a two year high in 2016 when mortgages worth £13.4 billion were approved. The average interest on a standard variable rate mortgage fell by 10 basis points to 4.57% in March 2016. Rates on new 2 year fixed rate mortgages fell by 6 points to 1.87%, 5 year mortgages dropped by 7 points to 2.71%. The buy-to-let market in the UK is a significant contributor towards the overall profitability of the sector, accounting for approximately 15% of challenger balance sheets.

In the US, mortgage balances shown on consumer credit reports stood at \$8.37 trillion, a \$120 billion increase from the fourth quarter of 2015.



Trends

By 2020 student debt is expected to grow to a staggering \$3 trillion, which is witnessing huge amount of attention from innovative marketplace lenders, P2P lenders as well as challenger banks. The stellar loan

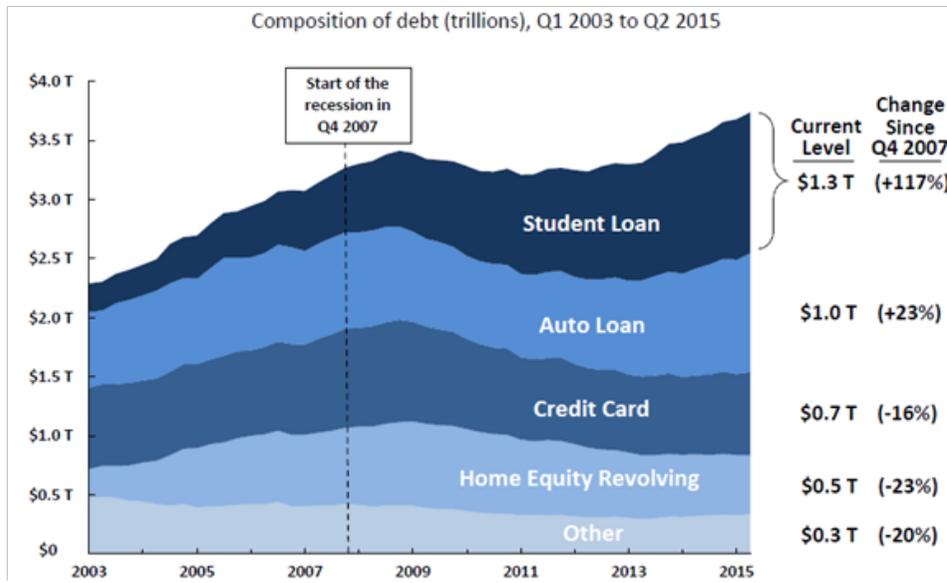
growth rate of the segment in addition to the rising tuition fees across universities presents a very lucrative segment for non-traditional banks. Most of the digital lenders are focusing on refinancing the existing loans.

Small firms consistently report higher financing hurdles given their small size, limited assets and general inability to raise funds through credit markets or publicly traded equity. Intense competition in the mortgage market is driving down mortgage rates as challenger banks are taking up market share from the more traditional players.

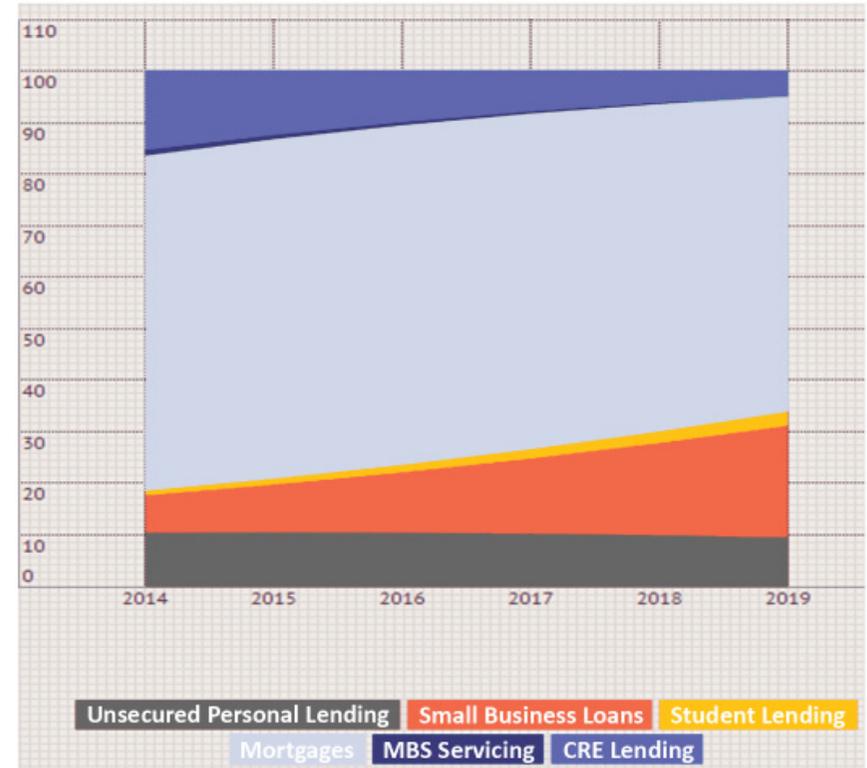


Insights

Student lending and mortgage lending remain one of the largest and most untapped markets by traditional banks. This provides a tremendous opportunity to niche challenger banks to grow quickly with relatively low customer acquisition costs in these markets. Innovative ways of underwriting, faster processing times and flexibility in pricing will be key to capturing these customers.



Non-Mortgage Household debt market in the US

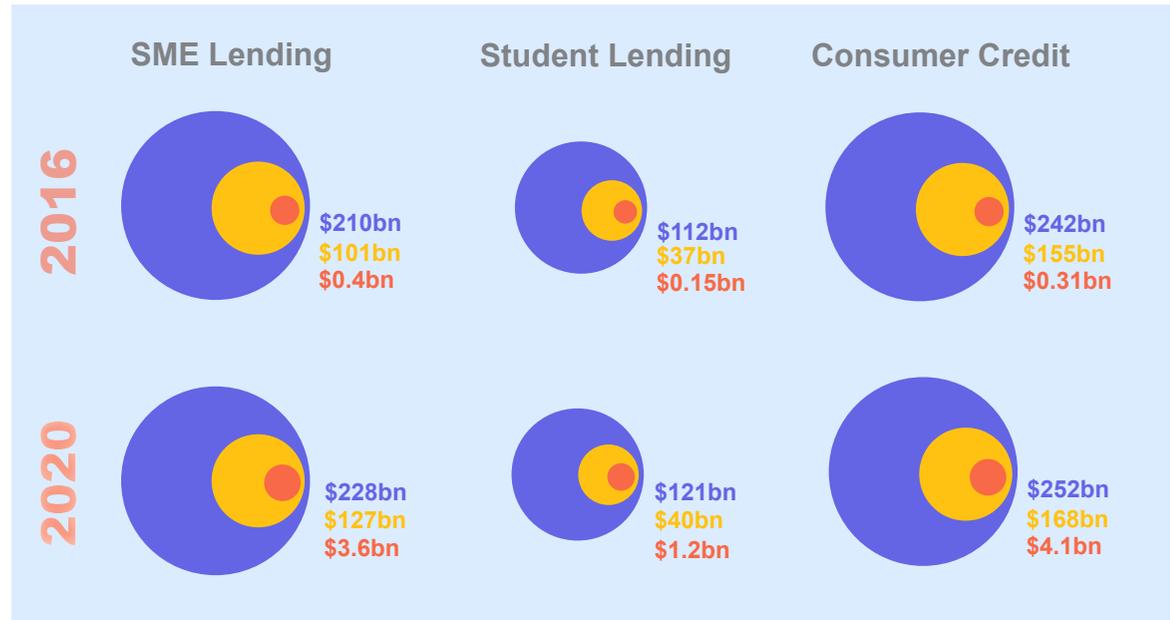


Debt market in the UK

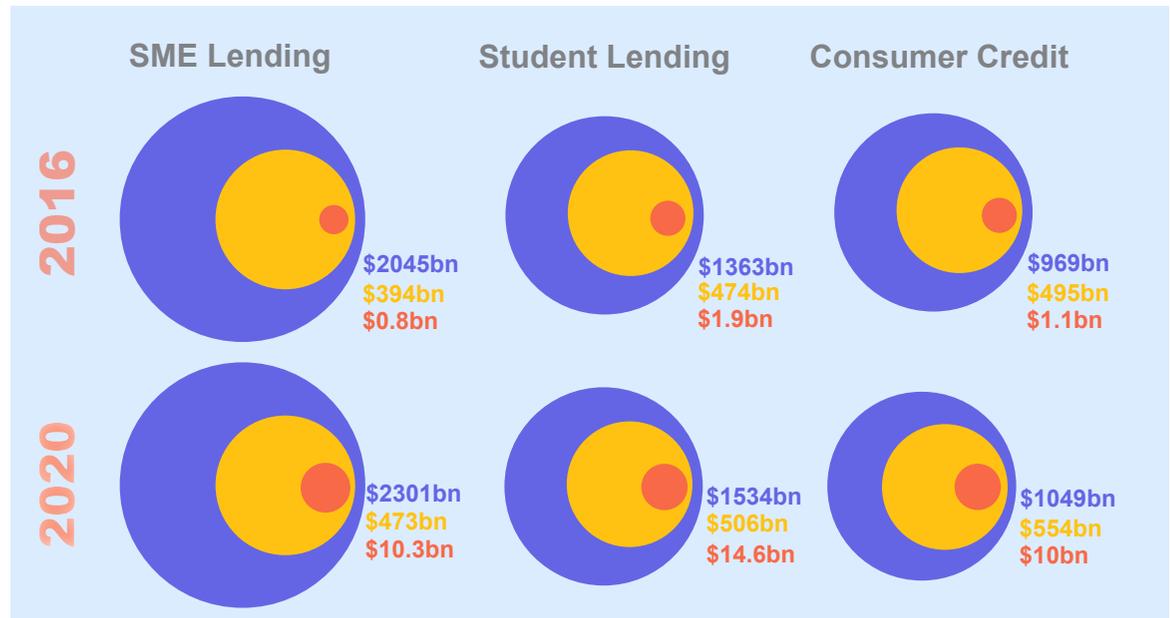
Traditional niche markets evolving into huge market segments for challenger lending

market sizing for challenger banks

Market Sizes (UK)



Market Sizes (USA)



- Total market for traditional, challenger and P2P players
- Market available to take for digital players including challengers and P2P
- Market available for challenger banks

REGULATIONS

Regulatory experiments and sandboxes



Policy is a key differentiator across regions for the launch and growth of challenger banks. Some directly or indirectly applicable regulations are listed below.

UK

Regulators

Bank of England (BoE). Financial Conduct Authority (FCA). Prudential Regulation Authority (PRA).

Key Initiatives

- The FCA regulates ~56,000 firms providing financial products and services to both UK and international customers. For ~32,000 firms, FCA takes the dual regulation approach with PRA.
- Solo regulation (by the FCA) includes a 4-step authorisation process and dual regulation required for banks, credit unions and insurance firms with PRA.
- Fintech accelerator by the Bank of England and Fast track FCA authorization and registration schemes along with its innovation hub helps challenger models understand regulatory implications.
- The initiative for sharing of SME data and the Small Business Enterprise and Employment Act are designed to help SME lending decisions.

- The Bank of England announced an extension to the Funding for Lending Scheme, now valid till January 2018. The FLS is designed to incentivise banks to boost their lending.
- The Bank referral scheme, announced by the Government, can force UK banks to suggest alternate financing options to those refused credit.
- Project Innovate introduced by the FCA to support authorisation for innovative businesses includes a regulatory sandbox to test out new offerings in environments exempt from standard regulations.
- Newer banks are required to hold more capital (8 -10 times higher than big banks) because they have fewer years of data on the robustness of their lending. After the Brexit vote, PRA is exploring options to address the issue to use a standardized approach for calculating the amount of capital required to make loans and potentially dis-applying the rigid application of Basel 2.

USA

Regulators

Office of the Comptroller of the Currency (OCC).
Department of Financial Services (DOFS).

Key Initiatives

- Basel 2 requirements are only used for big systemic banks and a proportional approach is applied to smaller banks by the local regulators.
- The Office of the Comptroller of the Currency (OCC) issued a white paper on supporting reasonable financial innovation through fintech.
- The Federal Deposit Insurance Corporation (FDIC) issued guidance on deposit insurance application and an article on marketplace lending.
- The Consumer Financial Protection Bureau (CFPB) finalized a policy to facilitate consumer access to financial products. It helps reduce regulatory uncertainty for a new product or service that has potential for huge innovation.
- The Federal Trade Commission (FTC) launched a series of forums to explore marketplace lending models.
- The Commodities Futures Trading Commission now treats virtual currencies as commodities.
- SEC is undertaking initiatives to balance capital formation for fintech companies.
- The Treasury Department has issued a call for public inputs on online marketplace lending.

Australia

Regulators

Australian Prudential Regulation Authority (APRA).
Australian Securities and Investments Commission (ASIC).

Key Initiatives

The APRA is setting up a permanent public-private collaborative committee to facilitate financial system innovation.

Innovation Hub (2015) was developed to help new fintechs navigate the ASIC's regulatory system. This includes making senior staff available at open events and industry hubs to respond to any questions.

The Digital Finance Advisory Committee includes members from fintechs, industry and academia to advise ASIC on the hub and its engagement with

innovative businesses more broadly.

Singapore

Regulator

Monetary Authority of Singapore (MAS).

Key Initiatives

The FinTech and Innovation Group (FTIG) (2015) is responsible for creating strategies and regulatory policies regarding technology innovation to test innovative new solutions.

The Financial Sector Technology and Innovation (FSTI) scheme (2015) has issued a commitment of £100m over the next five years to fund innovation labs, institutional-level projects and industry-wide initiatives.

TECHNOLOGY

Technology structure

With no legacy technology investments, challenger banks are taking a mixed approach for technology with most focusing on acquiring best-of-breed applications from established vendors and fintech startups. There are a few challengers building the technology in-house but the trend is overwhelmingly against this.

Abacus. A digital bank backed by a UK-based private equity firm, AnaCap, is evaluating suppliers: Temenos with its T24, Connect and Insight systems; and Misys with FusionBanking Essence

Aldermore Bank. For its core platform, it uses Temenos' T24 system and for digital banking, it has Backbase's Omnichannel Banking Platform.

Atom Bank. It uses FIS's Profile core banking system, Sungard's Ambit Quantum and Ambit Focus for treasury and risk management, Iress' Mortgage Sales & Origination (MSO) for mortgage, Wolters Kluwer's OneSumX for regulatory reporting, Intelligent Environments (IE) for front office capabilities, CSC's ConfidentialID for security and WDS Virtual Agent for customer queries.

Charter Savings Bank. It uses FIS/Sungard's Ambit Treasury Management, DPR Consulting and Phoebus.

CivilisedBank. It uses solutions from a local consultancy firm, Tusmor, and Profile Software's FMS

for core banking, Dovetail for payments, Sphonic for risk management and AML and Aqilla for accounting.

Fidor Bank. It has its own in-house developed technology and also licenses it to other financial institutions (such as Penta Bank).

Hampden & Co. Uses Oracle FSS's Flexcube core banking system, supplied on SaaS.

Metro Bank. Implemented Backbase's Omnichannel Banking Platform for its digital banking front-end, FIS/SunGard's Ambit Asset Liability Management solution and outsources mortgage processing to BancTec. It uses Temenos' T24 core banking system for the back-end on an ASP basis.

Monzo Bank. Built its own platform using open source stack: Linux, Apache Cassandra, Google's Go (golang) programming language at the back-end and PostgreSQL, a relational database.

Masthaven. Uses banking systems from DPR Consulting for both savings and lending.

OakNorth. Mambu's cloud-based core banking system is used at the back-end, and the digital platform from Backbase at the front-end.

OneSavings Bank. Uses Phoebus' lending platform to service mortgages (back office operations) and a DPR Consulting solution at the front-end.

Secco Aura. Secco describes its systems as a reverse cloud, where the data is stored and owned by the customer on their devices, as well as by the bank.

Shawbrook Bank. It uses Sandstone Technology for the front-end, Target Group for business process outsourcing and Brightstar's EasySource sourcing and case management. As a core platform, it uses Sopra Banking Software's Mortgage and Savings Suite.

Tandem Bank. It uses FiServ's core banking and its Agiliti platform on SaaS.

CASE STUDIES

Technology Case Study - solarisBank

As transcribed in an interview with solarisBank

There is a tremendous change happening in the banking industry. While most banks are still focusing on themselves, there are a couple of them who are willing to change to a technology company. Also, they need to cooperate more with fintechs – who are essentially working as catalysts to fuel and shoulder this change rather than handling the disruption all by themselves.

We, however, are already handling a tremendous change in the industry for one simple reason; many people have talked about the unbundling and the re-bundling, and banking being a market place, but we are actually building a platform with this concept. This concept takes banking from a very abstract level, breaks it into modular pieces, and merges them into the value chain of all things.

We first had an era of white label banking, which is purely legal and not technical. The relationships between companies and their technology partners were one-to-one and truly project-based. Banking as a platform, as we see it, has evolved from white label banking and differs massively: here companies enter into both legal and technical relationships. Due to the banking platform being a marketplace, n-to-n relationships between all parties are made possible.

For example, a bank looking for KYC or e-sign solutions in the past would ask a consultancy firm to obtain a list of vendors who would offer these services, put them through due diligence and then

get into contracts with the most suitable one. This is a process that would take 12 months at least. Now, solarisBank will have evaluated and brought on fintech companies who specialize in KYC or e-signing onto the platform which the partner can then utilize. They can connect to the platform and use one of our umbrella APIs with existing contracts to get the products or services they need. Thus the partner doesn't have to do everything themselves, but they obtain everything on the platform.

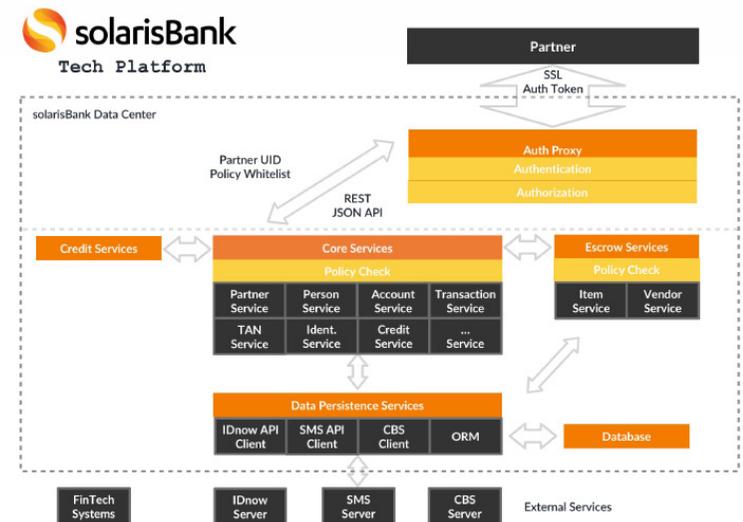
When it comes to technological innovation, the most important thing is that you have a culture which allows you to adopt fast. Big banks have lost their ability to adopt fast by outsourcing all of their technology externally because they did not see tech as a strategic essence to the company.

For solarisBank, tech is the an integral part of business. One example: we can do payment transfers within 24 hours in SEPA regions. That's actually technically possible, but the problem with doing that in a regular bank is that multiple people have to sign off on something like this. At a certain point of time it is not a technological issue anymore, it's more of an organizational process issue.

What is unique about this platform is that we have a micro-services approach which is highly scalable and has all the desired features of a bank. We measure the success of the platform with the

onboarding time for new partners to access our services – we want this to be as fast and smooth as possible.

We already have several fintech partners such as Cringle, Savedo or Kontist on the platform but also offer our services to more established digital players like AutoScout24 or fashioncheque. On the supplier side we will in the future also integrate blockchain and cryptocurrency startups. As a modern banking partner we ensure that not all services are built by ourselves but that we have a healthy balance between modules from solarisBank as well as third parties.



CASE STUDIES

Niche Market Case Study - Neyber

As told by Neyber

Neyber enables employees to reduce borrowing costs with access to affordable loans, offering repayments via salary deduction - all at no cost to the employer. As Neyber's technology integrates with payroll, employers can offer an easy-to-implement workplace financial solution that acts as a key driver for employee engagement, productivity and to reduce stress-related absenteeism. This in turn enables Neyber borrowers to save more and bolster their financial resilience.

Through its affordable rates, Neyber has delivered an effective 5% pay rise to the majority of its borrowers, by enabling them to consolidate their debts, saving them up to 20% on monthly debt repayments.

Neyber believes that there is both demand and opportunity for greater competition within the financial services industry, to the benefit of the consumer. Many consumers are paying exorbitant rates of interest for their loans or are unable to access affordable credit. Neyber is seeking to solve this imbalance within the £190 bn UK consumer credit market, and is well placed to help more borrowers as a consequence of its lower customer acquisition costs.

A recent UK survey found that a vast majority of the UK workforce is concerned about the amount of time spent worrying about finances at work and about the time taken off work due to financial stress.

Neyber has already proved that innovative product design can deliver greater access to reasonably priced financial services and boost financial inclusion. This is because we work directly with employers, are able to better know our customers and minimize credit defaults. We are able to approve over 70% of our loan applications. For those that we decline, debt management advice is provided through our partnership with Payplan, one of the UK's leading debt advice organisations.

Affordability is a fundamental consideration in all of our loan decisions, as is the financial wellbeing of our customers. In contrast, traditional lenders such as the high street banks and P2P providers decline a majority of their applicants. This is due to their inability to mitigate the risks of unsecured borrowing and the costs arising from inefficient legacy technologies. Their failure to provide credit also financially excludes loan applicants, who are sometimes forced to access loans from payday lenders at punitive interest rates.

The Future

To date major FTSE quoted companies, NHS Trusts, professional membership societies and mutual societies have opted to offer Neyber to their employees. Neyber envisages that its products will be widely taken up by employers across the UK employment market and that credit costs will be cut for millions of working people as a result.

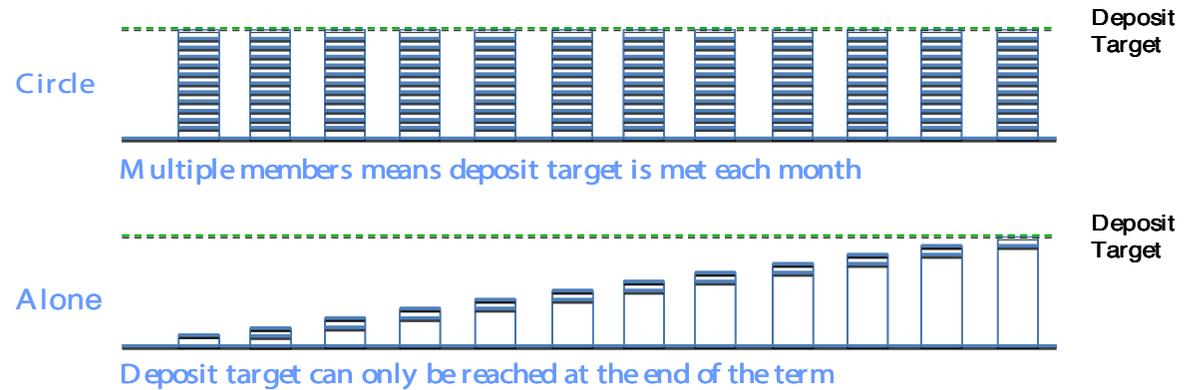
CASE STUDIES

Collaborative Finance Case Study - StepLadder

As told by StepLadder

In the UK today, qualified under-35s are struggling to own a home because saving independently for an adequate deposit has proven too hard for too long. Compounding this, the gap between wage growth and the rise in property prices grows ever larger. On one hand, the average earnings per week have risen by just £39, or barely 8%, over the last five years. Whereas, the September 2016 Halifax House Price Index shows the average UK property price has risen by 10% in just one year. The result is a generation stuck across a chasm. As the Economist reported, 46% of 25 to 34 year olds lived in private rented accommodation in 2014-5, nearly double the 24% of a decade earlier. A new approach is needed to overcome the challenge.

StepLadder is a UK peer-to-peer platform set to launch a distinctive proposition: the platform will facilitate the formation of screened, matched cohorts of prospective first-time home buyers into circles. The key difference between this lending circle and a traditional savings plan is that, whilst the monthly sums will be the same amount, a StepLadder member has the chance of getting the property deposit much sooner and, therefore, onto the property ladder.



StepLadder circles are a collaborative proposition that turns qualified prospective buyers' monthly payments into property deposits for each circle member to draw and utilize. As a result, members reduce the average the time to purchase their own home by 45%. After screening, matching and on-boarding, the circle members are introduced to each other and a new community emerges. As a result, StepLadder circles can revolutionise first-time buying by empowering individuals together.

This is facilitated by a "host" dedicated to the circle and its members. From StepLadder's proprietary survey, nearly 80% first time home buyers have savings reserved for a deposit. However, fewer than half have given much thought to a savings plan or calculated their ultimate buying power. Though a significant milestone, purchasing a first home is often an opaque and hidden-cost-laden experience. Today, in a £1+ trillion market, seven out of eight UK mortgages are arranged through independent advisors and brokers.

Access to specialist property buying resources and a commitment to information sharing are designed to be key elements of StepLadder's service.

The insight underpinning StepLadder is that despite having a highly sophisticated financial services industry, regulated, scalable Rotating Savings and Credit Associations (ROSCAs) are absent from the UK market. StepLadder is setting out to restore opportunity for prospective first-time home buyers using a financial solution that has been tried and tested worldwide, but new to Britain. Today, the target market – thanks to the explosion of social networks and peer-to-peer lending – has never been more receptive to a collaborative financial proposition. Results from over a dozen focus groups run by StepLadder confirm not just an overwhelming interest in the proposition but an appreciation of the proposed ecosystem benefits – group discounts, community, and the feeling of "someone on my side."

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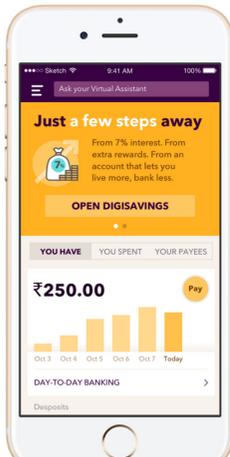
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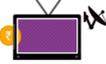
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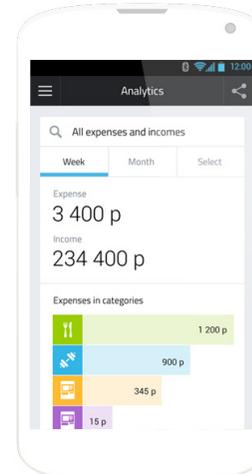
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Conclusion



Changing customer expectations.

A new set of customers in the financial world.

Heavy smartphone use in accessing finances.

A new approach to regional regulations.

Access to emerging technologies.

The perfectly timed external forces from demographic, social, economic and regulatory phenomena have contributed to arguably the biggest revolution in the banking world in

centuries – and the question now is whether the challenger banking is here to stay.

Customer acquisition costs

Achievement of economies of scale in a short timeframe, high customer acquisition costs and heavy competition in niche markets are real issues facing challenger banks today. They are having to compete both on the cost angle and the revenue angle with traditional banks and other challengers. They may also end up facing competition from consumer brands like Google, Apple, WeChat and Uber, who will have tremendous customer data available to monetise financial services if they wish.

Changing face of millennials

A new generation (Generation Z) is emerging who is treating content on the internet in a different way to the older millennials – they are predicted to value content ownership and privacy, worry about financial stability and mistrust content-based monetisation, which could affect the way challenger banks operate today.

Fast changing economics

Brexit, mass immigration into Europe, emerging powerhouses in China and India are shifting economic indicators rapidly and this will have tremendous impact on demographic and regulatory behaviour. How regulations will emerge to support the

challenger banking industry in the next two years remains to be seen.

The success in this space will clearly depend on either obtaining the customer's mindshare or on scaling up very quickly. Whether technology is built from the inside out or brought from the outside in, the key will be maintaining high modularity of products and services and being able to cater to micro-segments of the population with personalised products. The availability and utilisation of customer data will help these firms derive value very quickly. Aside from this, all we know is that the future of banking as we know it, is today, unknown.

Tweets



Richard Whale @RichardWhale · Sep 7
Report: **Challenger banks taking larger share of traditional lending**
dailyrecord.co.uk/business/busin... @AventionInc

Report: Challenger banks taking larger share of traditional lending
Research suggests as of April 2016, 34.4% of all UK business mortgages and charges are now with challenger banks and 32% of loans issued
dailyrecord.co.uk

BOB @picexec · Aug 29
Monzo boss warns major banks face ruin as they are swept away by new technology: The boss of challenger bank ...

Monzo boss warns major banks face ruin as they are swept away by ...
The boss of challenger bank Monzo has warned that major British banks face ruin as they are swept away by new technology, Tom Blomfield, Brita...
dailymail.co.uk

Joe Lim @JoeLim56 · Sep 7
Small challenger banks handling a third of business mortgages
mortgageintroducer.com/small-challeng... via @MortgageChat

Small challenger banks handling a third of business...
The 'big five' mortgage lenders' grip on the market has loosened when it comes to business mortgages.
mortgageintroducer.com

Eileen Burbidge @eilleentso · Aug 28
great run-thru of new challenger banks incl @monzo @L_bloom as well as @anneboden @starlingbank et al thetimes.co.uk/article/how-to... by @KikiLoizou

How to keep the bank manager in your pocket
Tom Blomfield tapped the screen of his iPhone. "A lot of other challenger banks are using mobile phones to deliver the same old boring banking service," he said, opening t...
thetimes.co.uk



euromoney.com @euromoney · Sep 6
Data sharing could hold the key for #challengerbanks in search of level playing field on risk weights ow.ly/dwEr303W3VG #bankcapital

Brexit offers glimmer of hope for challenger banks ...
The UK's challenger banks are stuck in a capital bind, forced to compete with each other on far worse terms than the big banks, but Brexit could offer a glimmer of...
euromoney.com

Olga Bravo Albarrán @OlgaBravoAlba · Aug 20
The latest challenger #UK #banks have placed open #APIs at the forefront of their strategies to maximize benefits

David M. Brear @davidbrear
Starling Bank and Mondo weaponize their APIs | Verdict Financial
bit.ly/2bpK7xv

FinTech Roundup @FinTech_Roundup · Sep 6
UK challenger bank @atom_bank starts drive for tech talent
bit.ly/2bPQq7 #ChallengerBanks #FinTech

Atom Bank

News and Opinion

U.K. Challenger Banks Jump More Than 25% as Brexit Fears Fade

by Richard Partington
August 26, 2016 - 4:38 PM IST

banking technology NeMa Asia
Home > Region > UK > Community Savings Bank Association joins UK challenger bank ranks

20 September 2016 Written by Tanja Andruszjan

A new challenger has joined the UK's banking market, Community Savings Bank Association (CSBA). The association, which is registered as a co-operative society, is working with an established bank, Avonle Savings Bank, to set up a UK-wide network of independent customer-owned, regional banks. These banks will support local communities and businesses.

CSBA Savings & Loans

BUSINESS INSIDER DEUTSCHLAND INTERNATIONAL

Atom Bank is raising £100 million and getting into mortgages

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Challenger bank Fidor adopts 'attack formation'

Computer Weekly talks to the man behind the digital challenger bank recently acquired by French retail banking giant BPCE.

Challenger banks have disrupted the banking sector without actually changing that much to date, but the acquisition of Fidor

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Business
Challenger Bank cuts cloth to deal with market slowdown

NICK GOODWAY | Tuesday 13 September 2016

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Alex Kregler
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