OLIVER WYMAN

Financial Services

THE DIGITAL DISRUPTION BATTLEFIELD

WINNING IN A TIME OF CHANGE

MARSH & McLENNAN COMPANIES

Digital technology has already transformed several industries, not only by digitalising the sales process but, in some cases, the product.

Specialist financial technology firms (FinTechs) and entrants from other industries, such as search engines and insurers, threaten to disrupt the banking market, ending the domination of the large traditional banks.

1. INTRODUCTION

With the start of the internet era in the mid-1990s, people began talking about the "disintermediation of banks". Internet banking and the declining use of cash and cheques would render the standard banking model obsolete. The value of branch networks would collapse and banks would be unable to compete with new players enjoying far lower operating costs.

Initially, little happened. In fact, from the mid-90s to 2007, banks in Europe and North America enjoyed unprecedented returns.

This boom ended abruptly with the financial crisis of 2008. Banks have since been struggling with recession, recapitalisation and re-regulation.

Now, to make matters worse, the predicted disintermediation shows signs of coming true. Specialist financial technology firms (FinTechs) and entrants from other industries, such as search engines and insurers, threaten to disrupt the banking market, ending the domination of the large traditional banks.

It hasn't happened yet. But banks cannot afford to be complacent. Economic history is full of business models destroyed by new technology. And digital technology is especially disruptive because it allows businesses to expand very rapidly. A firm operating out of a basement in Boston or anywhere else can reach customers all over the world. Customers can be acquired at almost zero cost and in the few seconds it takes to sign up online. And scale can be increased at little more expense than the acquisition or rental of more servers.

Digital technology has already transformed several industries, not only by digitalising the sales process but, in some cases, the product. Blockbusters and Borders branches have closed down not only because movies and books can more conveniently be ordered online but because they have become electronic products, deliverable online.

Does a similar fate await today's large incumbent traditional banks? Or, more positively, what can banks do to avoid suffering the same fate? That is the question addressed in this Oliver Wyman Perspective.

We begin by surveying the new competition in financial services before looking more closely at the particular threats and opportunities digital technology presents for banks, with a specific focus on Retail Banking within the EMEA region. We end by describing the broad strategic options available to banks responding to the digital threat.

2. THE NEW COMPETITION

Financial technology firms (FinTechs) have proliferated over recent years. FinTechs are typically focused on specific services or operations. Collectively, however, they now offer a wide range of financial services solutions, from payments to lending to wealth management.

FinTechs typically have lower fixed costs, more advanced technology and more user-friendly offerings than the banks they compete with. Investment in the sector has more than quadrupled over the last two years, and interest has spread from its Silicon Valley roots to hubs around the world, especially London.

Most of these FinTechs will never become big enough to displace banks. Many will fail. But some have already thrived and more will surely follow and have a major effect on banking as we know it today, doing serious damage to incumbents. The threat is increased by the likelihood of FinTechs teaming up with market entrants that bring other strengths, such as strong retail brands or distribution reach.

While FinTechs attract the media coverage, a potentially greater threat is posed by large players from other industries. The likes of Apple, Google, Amazon and Facebook have blurred the boundaries between traditional product and service categories. Their customer-friendly solutions encourage consumers to use them as a "one-stop" shop.

These firms are truly global, despite being much younger than their banking counterparts. For example, 83% of Facebook's daily active users are outside the US and Canada. Their loyal customer bases and large geographical footprints mean they are ideally positioned for future entry into the banking sector. Some initial movements are already visible in the payments area, with e-wallets, apps enabling Peer to Peer (P2P) money transfers and mobile point of sale solutions. Although payments are only a tiny portion of the overall financial services, these large players could soon expand into other core financial products, such as deposits and lending – for example, by developing P2P platforms.

More broadly, large players in industries with high frequency transactions pose a threat. Data proliferation and advances in analytics help retailers, telecoms, energy providers and media giants to understand the preferences and circumstances of their customers. Combining this information with their established distribution networks, these players are well positioned to offer banking services to a wide customer base and make superior returns through better proposition design, marketing and pricing.

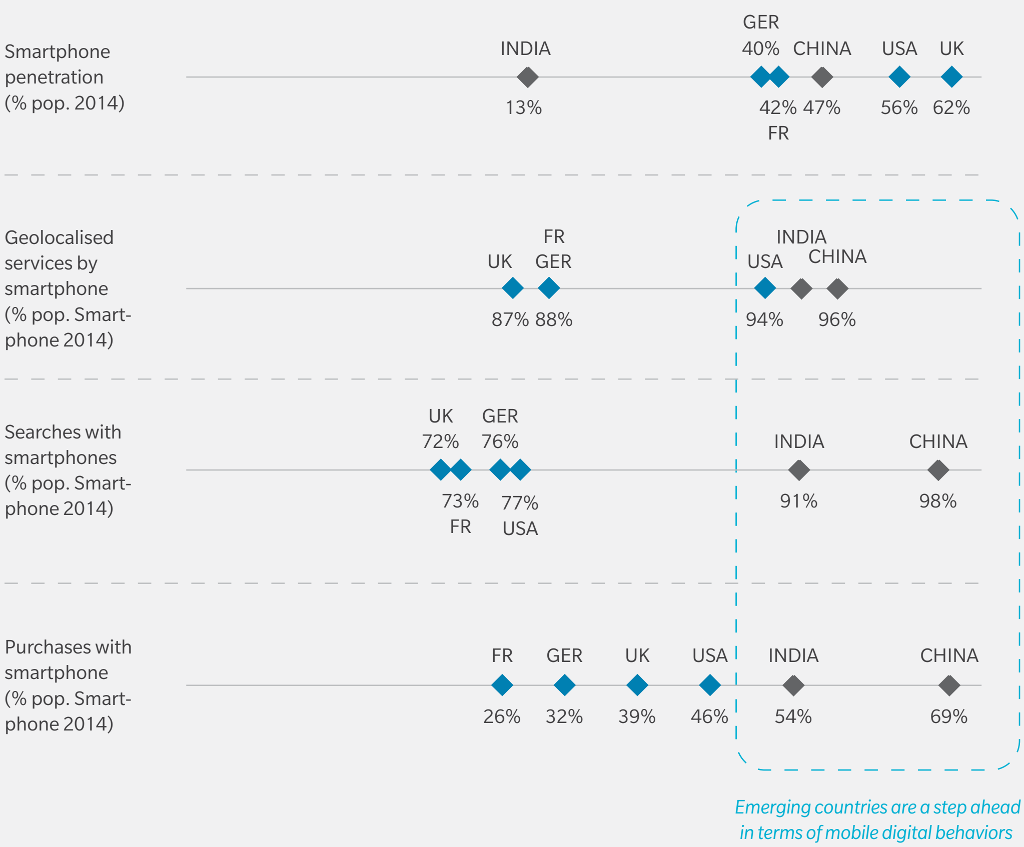
Large insurance firms also threaten banks' dominance. Along with the competitive assets described above, insurers have a pre-existing competence in financial services and an advantage in providing long term financing given the long duration of their liabilities and the capital and liquidity requirements of Basel III. The emergence of FinTechs provides insurers with ideal partners to expand their offering into banking at low cost.

CASE STUDY: TELCOS IN EMERGING MARKETS

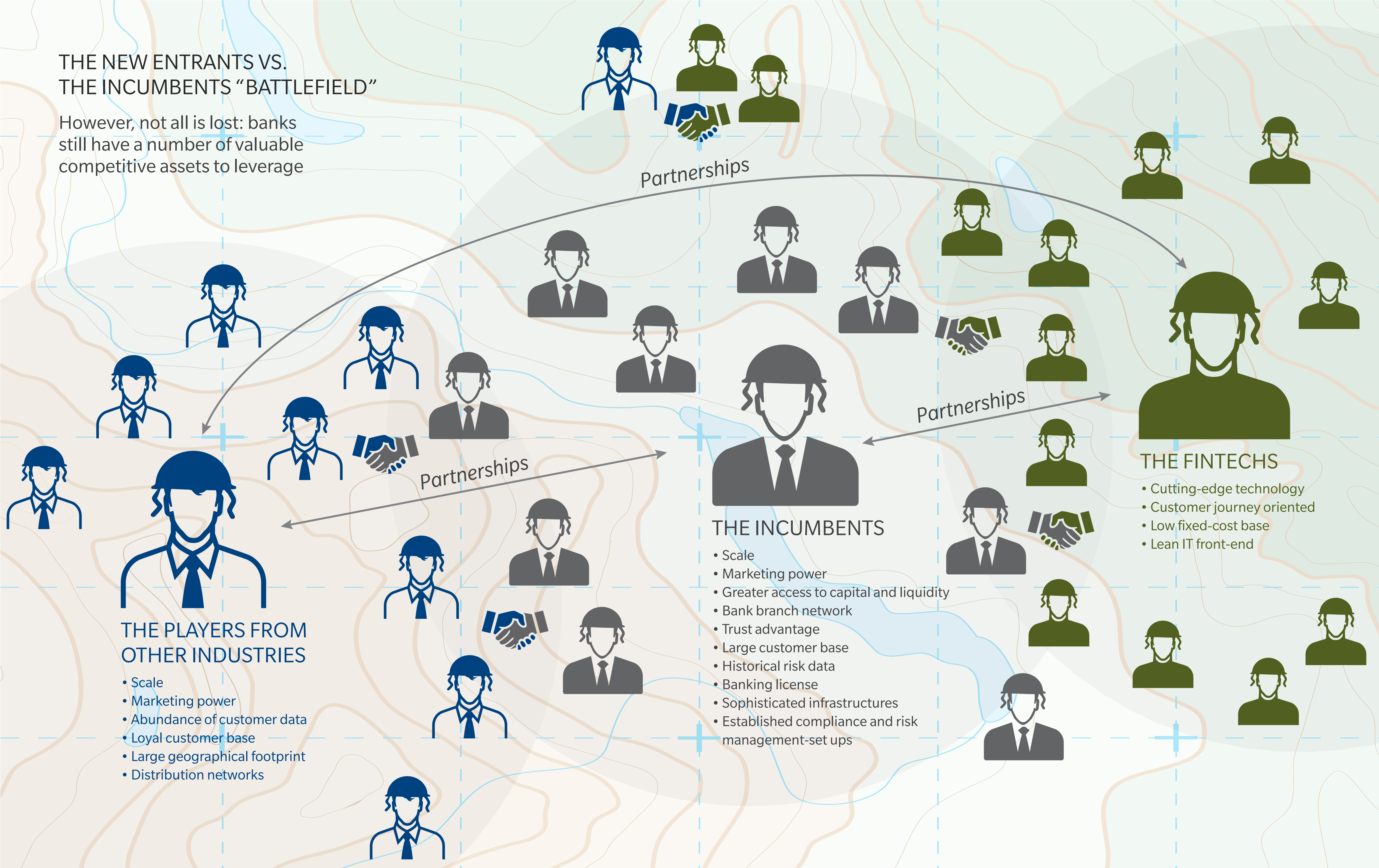
Emerging Markets have often proved an optimal testing ground for innovative digital models. High mobile phone penetration, a digitally-savvy population and a lack of alternatives have put some of these countries at the forefront of digital innovation. Without established infrastructures, firms are less constrained by compatibility with existing systems.

The emergence of Telco payment offerings in Africa provides a good example[1]. Vodafone's m-Pesa has revolutionised the money transfer market in Kenya. Orange Money's partnership with Total and BNP Paribas in Cote d'Ivoire, Mali and Senegal provides another interesting example. Customers can link their Orange mobile phone and BNP accounts, allowing money transfer between the banked and the unbanked. And a payments distribution partnership with Total extends Orange's mobile payments network while decreasing Total's cost of cash handling and increasing customer loyalty. The arrangement also allows BNP to collect transaction data that improves underwriting, reduces the cost and risk of cash handling, and increases customer stickiness.

SMARTPHONE USAGE: AN OPPORTUNITY



1 Orange.com press release 28 Nov 2014, Partnerships also operated separately in Cameroon (Total only), Madagascar, Niger and DRC (BNP Paribas only)


THE NEW ENTRANTS VS.
THE INCUMBENTS "BATTLEFIELD"
However, not all is lost: banks
still have a number of valuable
competitive assets to leverage
Partnerships
Partnerships
Partnerships
THE PLAYERS FROM
OTHER INDUSTRIES
• Scale
• Marketing power
• Abundance of customer data
• Loyal customer base
• Large geographical footprint
• Distribution networks
THE INCUMBENTS
• Scale
• Marketing power
• Greater access to capital and liquidity
• Bank branch network
• Trust advantage
• Large customer base
• Historical risk data
• Banking license
• Sophisticated infrastructures
• Established compliance and risk
management-set ups
THE FINTECHS
• Cutting-edge technology
• Customer journey oriented
• Low fixed-cost base
• Lean IT front-end

WHEN BAD GETS WORSE: THE CURRENT SITUATION OF INCUMBENTS

This new competition from FinTechs and Telcos comes when banks are already struggling in a post-crisis environment. Even where banks have restored their capital ratios, slow economic growth and near-zero interest rates constrain their ability to profit from credit expansion or to make decent margins on deposits.

Banks' struggles are exacerbated by post-crisis regulations. Higher liquidity and capital requirements are driving up banks' financial costs. Similarly, the greater regulatory emphasis on "conduct" under MiFID and the regime of the UK's FCA dramatically increases the operational cost of compliance. Budgets have little left over for "discretionary spending" on new commercial initiatives.

It is not only regulators who are demanding more of banks. Customers – and especially the "millennials" generation – have become more price-sensitive and now expect ultra-personalised, omni-channel propositions. And they are bound to become even more demanding. According to a December 2014 Celent report, 90% of innovation professionals from an FS-dominated group of respondents believe that customer expectations will increase in the future.

THE GOOD NEWS: BANKS HAVE VALUABLE COMPETITIVE ASSETS

Banks face "environmental" challenges and new competitive threats. But they do so with valuable strategic assets, some of which are difficult to replicate. These include superior scale and marketing power and greater access to capital and liquidity. People still have more trust in banks to deal with their money, even if this trust has been eroding in some countries. Banks also typically enjoy much larger customer bases than their FinTech competitors, have large quantities of historical data for risk management, and benefit from high regulatory barriers to entry.

3. WHERE THE THREATS AND OPPORTUNITIES LIE – OVERARCHING INDUSTRY TRENDS

FINTECH INVESTMENTS TO DATE: FOCUS ON LENDING AND PAYMENTS

FinTech investments are growing fast but from a small base. Our estimates indicate that total VC investment in Fintechs globally comes to only a fraction of the size of the average G-SIB (global, systemically important bank). While this means FinTechs are still small compared to the size of the banking system, their rapid growth indicates that banks should pay attention sooner rather than later.

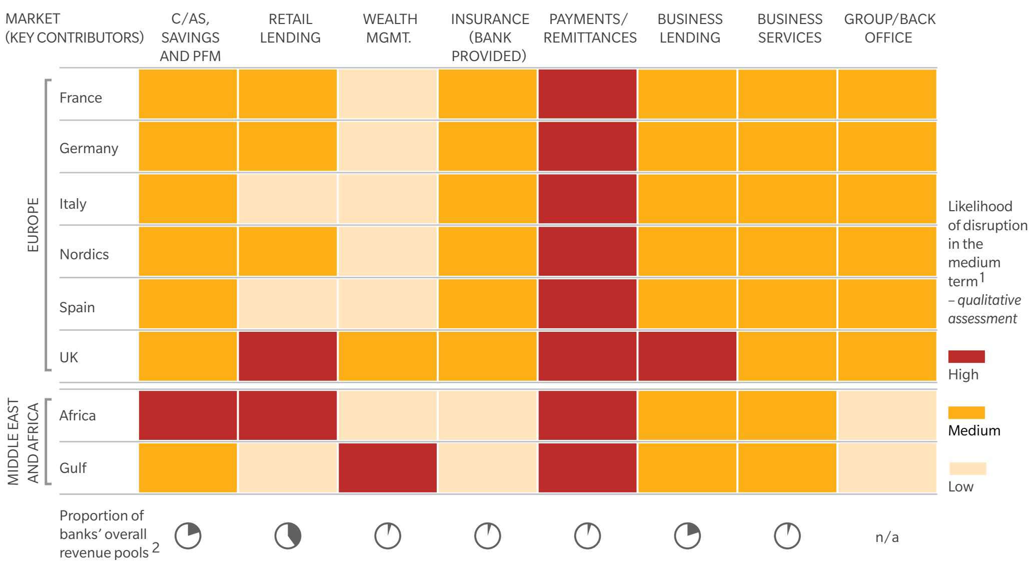
Over $23.5 BN of venture capital has been invested in the 200 leading FinTech companies since 2000. Almost two thirds of funding has gone into consumer lending (27%), payments (23%) and business lending (16%). Some of these companies aim to disintermediate banks altogether, such as peer-to-peer lenders and money transfer companies, whilst others target specific components of the value chain, such as mobile point-of-sale solutions. Unsurprisingly, investment has generally gone into high margin activities such as payments, or areas where the process inefficiency of incumbents' offerings creates an opportunity for improved customer service, as with highly manual, time-consuming mortgage applications.

Over three quarters of investment has been directed towards North American FinTechs. But this does not mean that digital disruption is a US-only phenomenon. Over 40% of funding for US domiciled Fintechs has been for those with international offerings. For example, Stripe is a US-firm providing payments processing services to e-commerce businesses in 20 countries.

To make a qualitative assessment of the likelihood of disruption by product and geography (see Exhibit 1), we interviewed market experts across the EMEA region. In keeping with the historical investment analysis, payments and remittances were identified as the most likely product group to be significantly disrupted in the short to medium term. Banks are already responding in most countries, for example, by offering payments "apps" allowing free P2P money transfers. The UK was the market identified as the most likely to be heavily disrupted, supported by the significant proportion of EMEA venture capital funding focused on the UK.

Some countries present interesting propositions surrounding mortgages (e.g. in Germany and France) and the impact of aggregators and brokers (e.g. in Nordics). In non-European markets, innovative distribution models (e.g. in Africa) and surging demand (e.g. Wealth Management in the Gulf Area) provide the greatest potential for disruption to banks.

Exhibit 1: The product / geography "heatmap"



1. Defined in terms of the extent to which competitive dynamics are likely to change in that segment

2. Based on Oliver Wyman analysis of major European markets; split varies considerably on a country-by-country basis

BEWARE OF THE NEXT WAVE: INNOVATION 2.0

The financial services landscape has changed significantly over the last decade. But we believe the real disruption is yet to come. As technologies improve, and financial service providers and customers become more familiar with them, revolutionary propositions are likely to appear. Examples that are emerging over the next few years include:

- Distributed ledgers enabling real-time, fully automated banking operations for transactions of all kinds
- "Smart" data analytics are significantly improving banks' ability to extract value from the large amount of information available
- Frictionless products and processes dramatically reducing manual intervention required on common products and services, such as house purchases and investments
- Applying the "internet of things" to financial services, enabling the sector to embed and enrich its internal decision-making processes and external commercial propositions with information derived from the growing number of connected objects

4. WHAT ARE THE STRATEGIC OPTIONS FOR BANKS?

How can banks equip themselves to succeed in this new competitive context? The answer to this question will differ from bank to bank. Nevertheless, we believe all banks should develop their strategic response in three steps:

- Understand
- Challenge
- Define response

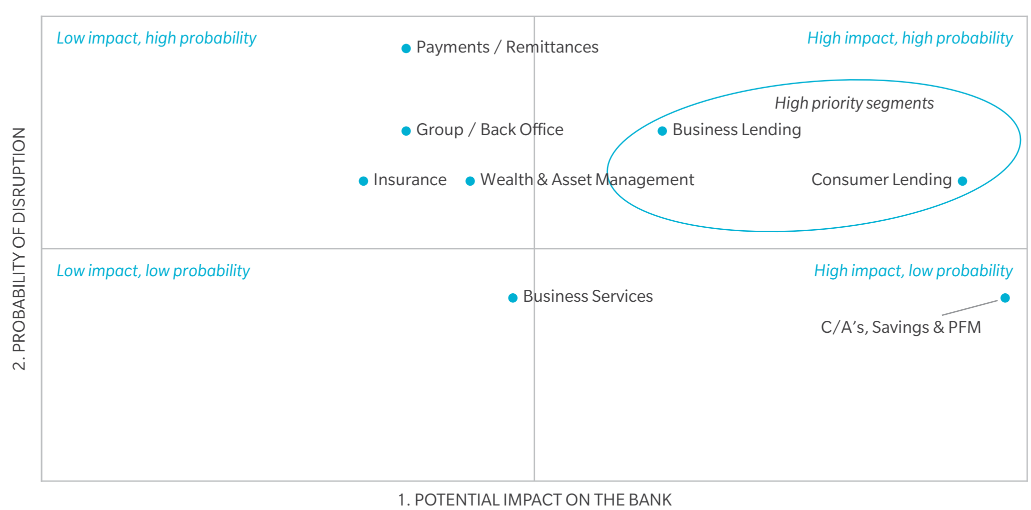
A: UNDERSTAND HOW DIGITAL DISRUPTION AFFECTS YOUR BUSINESS MODEL

Only a small proportion of FinTechs will be successful and only a few financial products and processes will be changed radically in the coming years. However, ignoring the trend will cause incumbents to overlook players that ultimately become major disruptors. Financial institutions must invest time and resources in understanding how digital change is likely to affect them. How is technology and the market developing? Which parts of the current bank revenue and profit pools are most at risk? Which innovations present the greatest opportunities? What are the capital and liquidity implications of recent trends?

A useful tool to support this exercise is an impact vs. probability matrix.

Exhibit 2: Impact vs Probability Matrix

POTENTIAL APPROACH – IMPACT VS. PROBABILITY MAPPING
ILLUSTRATIVE; MAPPING WILL VARY SIGNIFICANTLY ON A PLAYER-TO-PLAYER BASIS



1. Potential impact on the bank. What is the profit at risk for your institutions? How important is the customer segment or part of the value chain in terms of synergies with other activities and "fit" with long-term strategic goals?
2. Probability of disruption. How likely is it that new entrants will displace incumbents? How durable are the company's competitive advantages? How easily could it match or outcompete new entrants from a cost, management time and effort perspective?

   This kind of assessment helps identify the services and parts of the value chain that banks should focus their attention on: namely, those that are central to the bank's success and are under significant threat or that present a large opportunity.

B: CHALLENGE THE WAY YOU DO BUSINESS

The new competitive landscape can lead established players to completely rethink the way they do business. In this section we focus on traditional banks facing pressure to transform their end-to-end provider model.

New entrants are putting pressure on margins in various products. This can challenge the current banks' "subsidiarity model" of pricing current account and savings products as loss-leaders to encourage cross-selling of higher margin products. Banks may need to reconsider the standard practice of offering the full range of banking products.

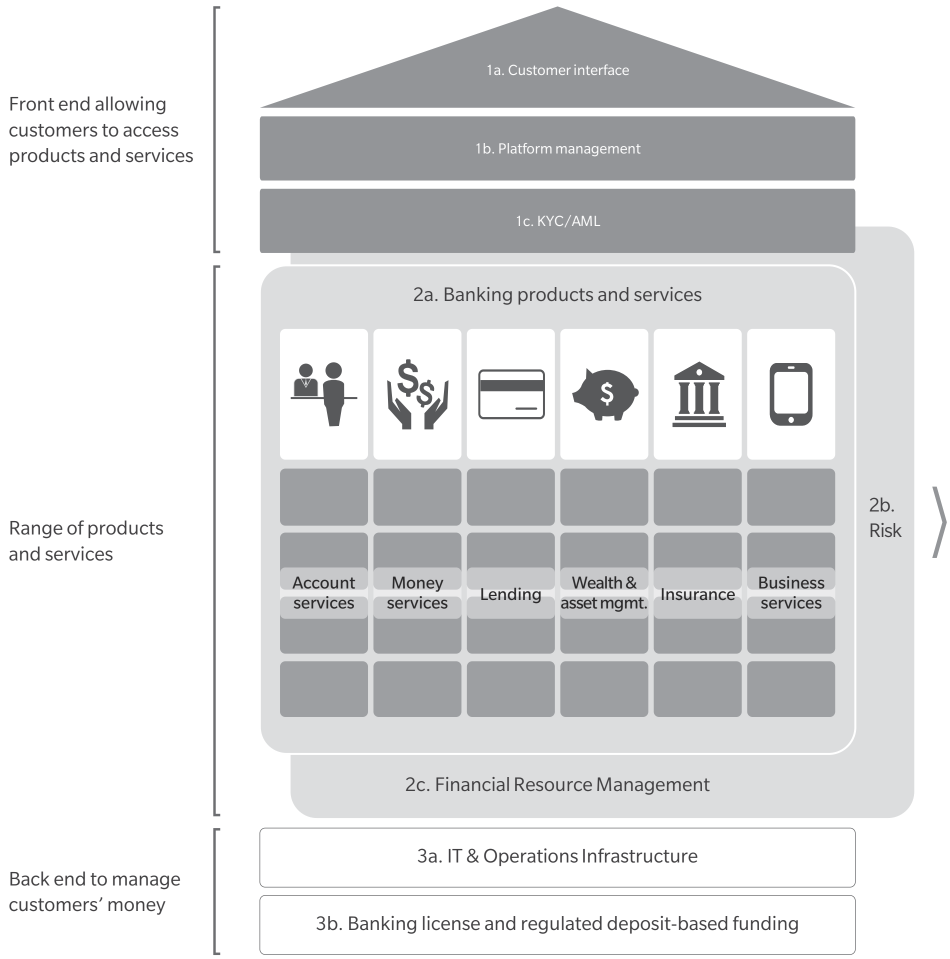
Regulatory change is also putting pressure on the end-to-end model. For example, the proposal for a second EU Payment Services Directive (PSD 2) encourages increased openness of a bank's system architecture. The proposed legislation would oblige banks to make their systems and account transaction data accessible to cardless, account-to-account payments systems (e.g. PayPal) and account aggregation services, such as personal finance management apps.

These changes will make outright competition with new entrants difficult. But competing is not the only option. Banks should explore opportunities for cooperation. As a starting point for assessing such options, it is useful to think of the standard banking business model as falling into three major components:

- A front-end allowing customers to access products and services. This includes the customer interface (face-to-face processes and digital touch-points such as apps and webpages) and, when products from multiple providers are offered, platform management and KYC/AML activities
- A range of products and services. Offerings vary across banks. In retail and business banking they typically include deposit accounts, payments, lending, wealth and asset management, insurance and business services, which are supported by risk and financial resource management activities
- A back-end to manage customers' money, which requires a banking license

Exhibit 3: Components of banking

FRAMEWORK: 3 KEY MACRO-COMPONENTS OF BANKING ACTIVITY



1a. Face-to-face processes and IT front-end: client interaction touch-points with bank products (bank website, apps, fan pages)

1b. Process of integrating FS products and offerings from multiple providers and choosing which ones to make available to customers

1c. Key entry point to platform in a modular structure: enables full portability across products and services within platform without repeat KYC/AML process

2a. Banking products and services (range shown in Exhibit 3)

2b/ 2c. Risk and financial resource management

3a. IT & operations architecture (connectivity, functionality, support) that enables the provision of products and services

3b. Authorisation to carry-out deposit taking activities and resulting funding (a key barrier to entry for non-bank players)

Note: Account services includes current account opening / checking as well as savings and deposits; money services includes payments and remittances; business services includes both SME and large corporate solutions

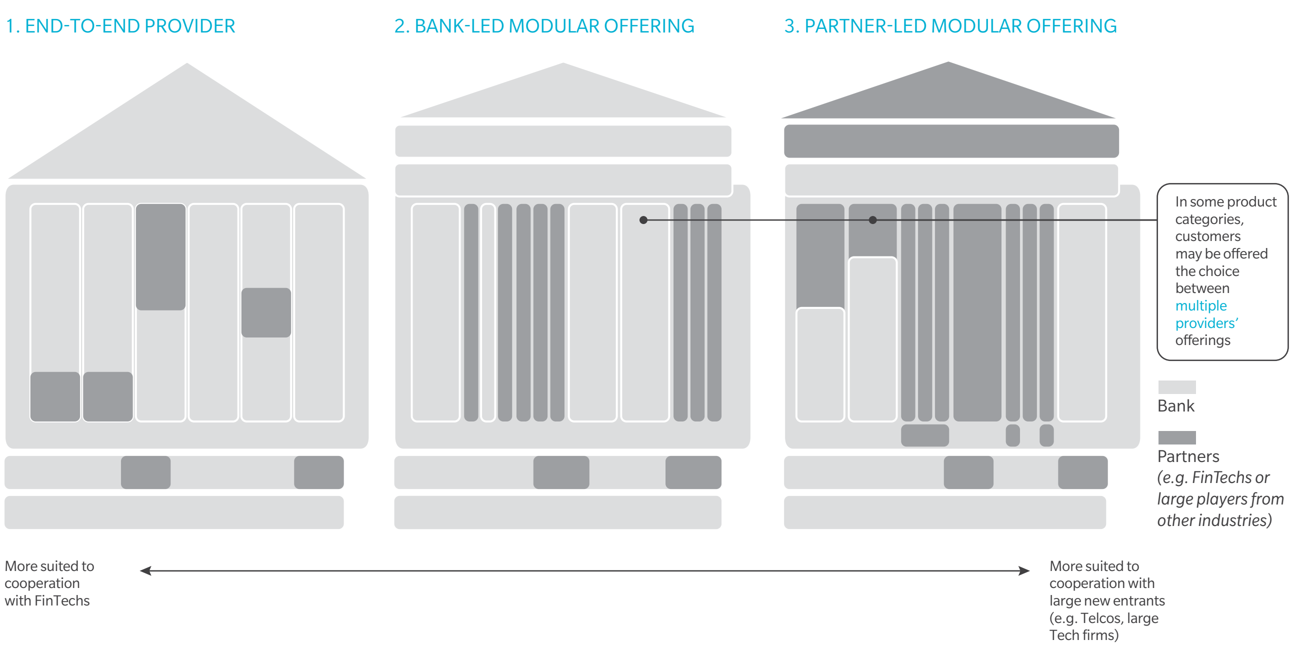
Broadly speaking, banks can adopt one of three business model archetypes, each involving a different degree of cooperation with other players. While these archetypes can never represent a large bank's business model perfectly, they help to think about the broad options available.

BUSINESS MODEL ARCHETYPES

1. End-to-end provider: The bank provides end-to-end services, keeping customer-facing activities in-house. However, innovation may be achieved through cooperation with partners in selected parts of product value chains. This model requires excellence across a broad range of offerings so that customers want everything from one provider
2. Bank-led modular offering: The bank provides the core banking system, and acts as “service hub” for partners’ products and services. Customer interface, platform integration and KYC/AML are managed by the bank but the customer can select other providers’ offerings. For example, customers can access peer-to-peer loans from a specialised provider directly from the bank’s website without needing to go through any additional KYC or AML procedures
3. Partner-led modular offering: This is the same as the second archetype except that the customer interface and platform management are handled by the bank’s partner. This model is well-suited to cooperation with a large player from another industry, taking advantage of its large customer base and distribution network

Which archetype best characterises your organisation today? How will this change in the medium term? For some players, end-to-end banking might remain the best model. Others will do better transitioning to a “modular” model which focuses on an organisation’s strengths and outsources the rest.

Exhibit 4: Framework: 3 Model Archetypes



CASE STUDY 1: OUTSOURCING OF VALUE CHAIN COMPONENTS BY END-TO-END BANKS

CONSIDERATIONS

- Banking players face important decisions across a number of intertwined dimensions
  - Which value chain elements to provide?
  - Which customer segments to serve?
  - Across which products?
  - In which geographies?
  - In which points in time?
- The preferred end-state is likely to be a complex combination of choices along these dimensions, which will reflect a bank's specificities, its market context and its strategic objectives
- Archetypes can help understand the general direction the institution is moving towards, but more granular decisions still need to be taken
- Banks should invest time and money to drill down into specific areas that present the biggest threats (or opportunities) to their offering and, where required, redesign their processes to address this

EXAMPLE: ASSET MANAGEMENT

Value chain dimensions and emerging imperatives for asset managers

Banks must choose which aspects of the value chain to focus on, in light of competition from new entrants and capabilities required to compete along different dimensions

Marketing	Sales	Client service	Asset allocation and research	Investment selection	Trading	Performance analysis	Operations	Admin

RETAIL

Marketing / Sales / Client service	Asset allocation and research / Investment selection / Trading	Performance analysis / Operations / Admin
• Build direct connection to end-clients through: – Digital marketing capabilities built on brand – Advisory tools • Explore linkages to new distributors and channels • Improve customer experience via multichannel access and information provision: exploit brand	• Broaden scope of research information supporting investment process • Explore automated discretionary management provision • Selectively expand asset class coverage	• Exploit cost reduction opportunities through reengineering, cloud services and outsourcing

INSTITUTIONAL

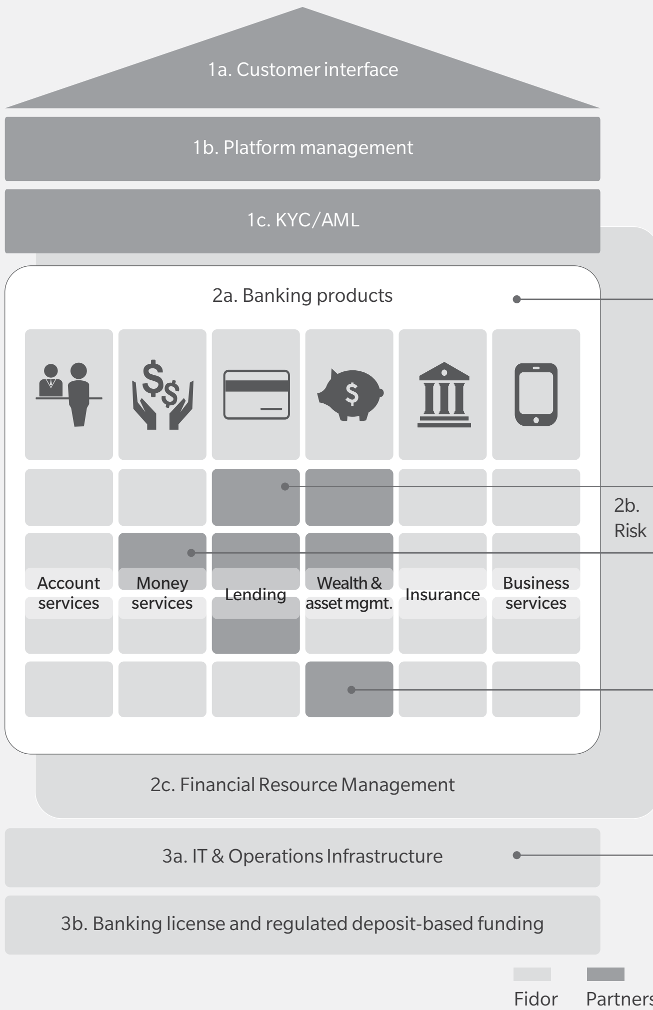
Marketing / Sales / Client service	Asset allocation and research / Investment selection / Trading	Performance analysis / Operations / Admin
• Improve institutional marketing capabilities – Enhanced CRM – Improved Salesforce efficiency • Build / enhance information-rich digital linkages to clients	• Broaden scope of research information supporting investment process • Explore opportunities to improve economics of investment decisions using robots / tools	• Exploit cost reduction opportunities through reengineering, cloud services and outsourcing

CASE STUDY 2: FIDOR GERMANY – A BANK-LED MODULAR OFFERING

FIDOR IS A GERMAN, MOBILE ONLY NEO-BANK

- Fidor has built its own core platform and has created a series of APIs to generate an open architecture modular bank offering
- It has experienced strong early-stage popularity linked to the strength of its "community offering", strong marketing and involvement in social media
- The loyal, although small (~$350MM assets) customer base has permitted expansion, leveraging the open architecture modular bank set-up to offer multiple different financial services offerings, including
  - Crowdfinancing
  - Social Trading (Inc. Commodities)
  - Savings bonds

ILLUSTRATIVE REPRESENTATION OF STRUCTURE



- Customer interface currently managed by Fidor in Germany
- Modular structure with API connectivity would also allow the product to be distributed by a partner

- Fidor has partnered with external providers across multiple products and value chain components, e.g.

Smava provides a P2P lending function

Ripple provides cryptocurrency payment acceptance capabilities

Sharewise provides an equity investment and trading platform

- German banking license, IT & Operating system run by Fidor,
- Highly adaptable, modular operating system that is also white-labelled to other providers (built in a way that it can run on top of existing core banking systems)

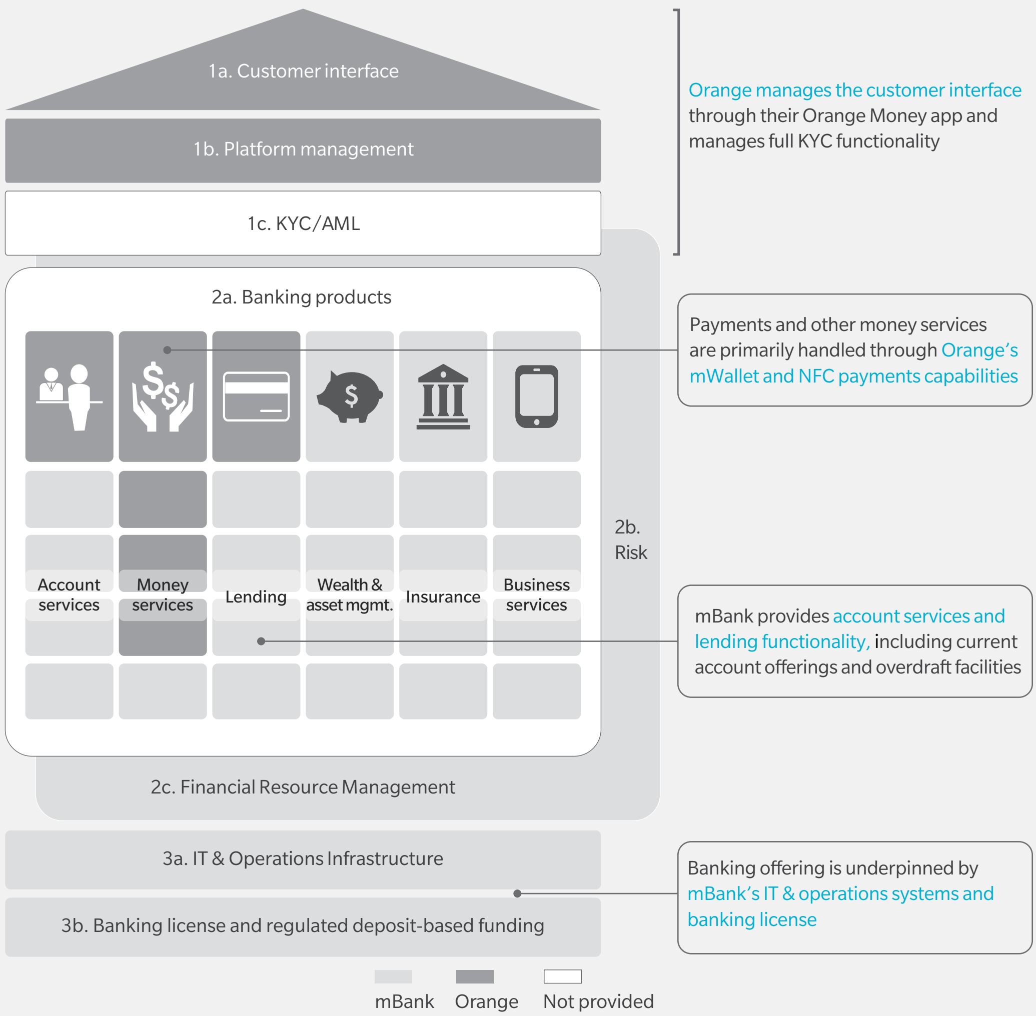
Source: Fidor Bank, Celent Model Bank 2015 Report

CASE STUDY 3: MBANK AND ORANGE TELECOM PARTNERSHIP IN POLAND – A PARTNER-LED MODULAR OFFERING

ORANGE PARTNERED WITH MBANK TO LAUNCH A MOBILE BANKING SERVICE IN POLAND IN 2014

- Poland is highly suited to fast mobile banking adoption:
  - 38.4MM highly connected inhabitants
  - 73% of payments terminals accept NFC
  - 3 million mobile payments users
- The partnership capitalises on mBank's banking experience and core banking systems as well as Orange's network, m-Wallet and NFC expertise to deliver a market leading mobile banking product.
- Since launch, Orange have experienced great success
  - 100k customers in the first 5 months
  - Expected to generate ~1 MM new customers
- Orange is now targeting expansion of banking offering into France and Spain by 2018

ILLUSTRATIVE REPRESENTATION OF STRUCTURE



Source: Orange Website : Poland-keeping-one-step-ahead-with-Orange-Finanse, Orange 2020 press release , Business "Orange veut sa part du marché de la banque mobile", 17 March 2015; Fiercewireless.com; Wireless Today; App Store

C: DEFINE YOUR STRATEGY FOR ACQUIRING INNOVATIVE CAPABILITIES

How should a bank strategically respond to the digital threat? The answer should not be left to a number of separate uncoordinated decisions. Banks should ensure that they have a complete and coherent view of the intended scale of their response. We see four potential stances, ranging from large investments to ignoring innovation altogether, each with its advantages and drawbacks. The required investments depend on whether the strategy is based on internal development, acquisitions or partnerships (see Exhibit 5).

We see banks taking a variety of approaches to these challenges (see Exhibit 5). For example, BBVA has made large investments – both via acquisitions, including Simple for $117 MM, and by developing in-house digital capabilities and empowering staff in its Digital department. On the other hand, several banks have adopted a "wait and see" strategy. Whatever approach is taken, it should not be the result of panic or inertia. It should be the result of sound analysis of the trends, threats and opportunities.

Exhibit 5: Strategic Response to Digital

Innovation: a wide range of options

COMMITMENT TO DEVELOPING A DURABLE IN-HOUSE ADVANTAGE

COMMITMENT TO DEVELOPING INNOVATIVE CAPABILITIES (High → Low)

Strategy	Internal	Acquisition	Partnership	Pros	Cons
Invest now, making large commitments *"Investment is needed now; and we know what in"*	Invest in and empower staff / whole business units to promote innovation within the business	Make one / multiple large investments to purchase established innovative players	Engage in a large scale partnerships (e.g. with large new entrants from other industries and / or FinTechs)	• Can be most effective way to get ahead / catch up lost ground • Easier to align Group strategy to innovation push	• Higher financial risk • High upfront investment
Invest now, making many small bets *"Investment is needed now; but we cannot tell what the next big thing will be"*	Multiple employees / teams working on piloting new innovative capabilities with a "test and learn" approach	Make multiple investments into small FinTech firms while they are in an early stage and cheap	Partner-up with small FinTechs on a broad range of small-scale projects	• "Success or fail fast" approach improves the pace of innovation • Limits risk of missing out or getting it very wrong	• Moderate financial risk • May delay the convergence towards the target state (if already defined)
Wait and see *"We would rather wait for future developments before committing our money"*	Keep a watchful eye on the area of interest and invest into top talent once the segment matures	Keep a watchful eye on the area of interest and acquire once the opportunity matures	Keep a watchful eye on the area of interest and partner up once the segment matures	• Low risk: pick and choose based on observed performance	• Costlier to buy / invest / hire once firms / market segments mature • Competitors might get first movers' advantage
Ignore *"Disruptive innovation is not area of major interest / concern"*	Focus management / staff attention elsewhere			• Efficient use of management time	• Likely to get left behind; much more vulnerable to full-scale disruption • Costly to enter at a late stage

5. CONCLUSION

The digital revolution is transforming the competitive landscape in financial services. New entrants pose a potentially profound threat to incumbent traditional banks. Most of this new competition has so far been in payments and lending. Greater disruption can be expected from the next wave of FinTech innovation. Banks need to understand these threats, take them seriously and respond to them.

Oliver Wyman has supported many institutions facing the "innovation dilemma": from strategic reviews to organisational redesigns, from educating top executives to full-scale capabilities assessments. The authors of this report, together with broader experts' panel within Oliver Wyman, would welcome further discussions on this topic.

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