



MODULAR FINANCIAL SERVICES
THE NEW SHAPE OF THE INDUSTRY

EXECUTIVE SUMMARY

- Financial services are becoming modular. Industry leaders need to understand the changes involved, the implications for their business models and the proper strategic response
- New technology is making it easier for customers to buy from multiple product providers. The number of financial products used by the average customer is increasing. We call this modular demand
- Financial services firms are using more third party suppliers. Providers of specialist services, back office processes and risk capital can now seamlessly plug into a supply chain. New entrants have new, focused business models. We call this modular supply
- Modular financial services are emerging at different rates in different markets. US banking is more modular than equivalents in Europe and Asia. Property & Casualty (P&C) insurance has become more modular than Life due to the frequency of purchasing. Parts of the industry, such as US mortgages, have long been modular on account of distinctive market structures
- A combination of forces is driving the shift to a modular industry. Distribution will become dominated by digital “platforms” that can steer demand to any supplier, allowing new product providers to proliferate. Regulatory changes, particularly around customer data, will also weaken financial firms’ hold on their customers
- Modularizing forces are not unopposed, however. Large integrated financial services firms continue to enjoy advantages, including their existing customer relationships, secure at-scale operations and the fixed costs of regulatory compliance
- Future regulation may affect the industry more than existing capital reforms. Rulings will be needed on matters such as customer data ownership, platforms’ liability for customer protection and anti-money laundering (AML), alternative sources of risk capital, and cyber risk management. Each of these could shift advantage across the value chain
- Costly, inflexible legacy infrastructure will be unsustainable in a modular industry. Many firms will need to overhaul their back office processes and systems. For large banks this will cost billions of dollars, a capital expenditure that may require dividends to be suspended for a year or more
- Modular financial services are not all bad for existing firms. It will allow them to develop new services for customers, build cheaper and more flexible back offices and use capital more efficiently. However, it will entail material change, and change results in winners and losers
- In an industry generating \$5.7 trillion of revenue today, we estimate that \$1 trillion of revenue and costs are up for grabs from these changes. New customer platforms will be able to charge suppliers for access to flows. Price transparency will erode margins and reduce the opportunities for cross-selling. Innovative products and business models will capture share. Excess infrastructure capacity will be cut and suppliers of outsourced services will grow significantly

10.30 AM.
MARIA WALKS INTO
A DOWNTOWN ESTATE
AGENT BOOTH



I'M LOOKING FOR A ONE-BEDROOM FLAT IN TOWN. DO YOU HAVE ANYTHING FOR LESS THAN 3 MILLION?

YOU ARE IN LUCK, MADAM. SUCH A PROPERTY CAME ON THE MARKET TODAY. I'LL TAKE YOU ON A VIRTUAL TOUR

A male agent in a dark suit and tie is holding a handheld VR device. He is looking at Maria, who is also wearing a VR headset. The background is a simple grey wall.

IT LOOKS GREAT. I'LL TAKE IT!

WONDERFUL! I'LL JUST NEED YOU TO SIGN THE CONTRACT AND ARRANGE MEANS OF PAYMENT

The agent is speaking to Maria. She is holding the VR device. The background is a simple grey wall.

UPDATE ON MY FINANCIAL SITUATION, PLEASE

Yes!

Maria is shown from the chest up, looking at the agent. She has a slight smile. A yellow speech bubble with the word "Yes!" is next to her.

I'm opening your Money Manager. You have 1 million in bonds and 2 million in your equity portfolio

LIQUIDATE MY BOND PORTFOLIO AND SET THE FUNDS ASIDE FOR A DEPOSIT

Transaction complete.

The agent is using a handheld device. Maria is looking at the screen. A yellow box at the bottom right says "Transaction complete." The background is a simple grey wall.

NOW I NEED A MORTGAGE FOR 2 MILLION.

Your Independent Credit Rating has expired. Would you like me to get it renewed?

YES, SHARE ALL AVAILABLE INFORMATION.

You have received a B2 rating. You now need to upload the property and legal documents

The agent is sitting in a chair, looking at Maria. The background is a wall with a grid of small images showing various interior spaces. A yellow speech bubble from the agent asks about her credit rating. Maria's response is in a white speech bubble. Another yellow speech bubble from the agent explains the B2 rating and the need to upload documents.



10:41
76°

YOU SEARCHED: MORTGAGE OFFERS

- 1. Family Finance 4.5%, 30 years
- 2. Mobile Finance 3%, 30 years
- 3. Anonymous Bank 6%, 20 years
- 4. Phlshy Phinance 35%, 5 years
- 5. National Ban 5%, 3%

You have received five mortgage offers.

The recommended quote is from Mobile Finance at 3% for 30 years fixed. Would you like to hold this offer?

YES.

You also need life cover as well as buildings insurance - can I share your health status?

YES.

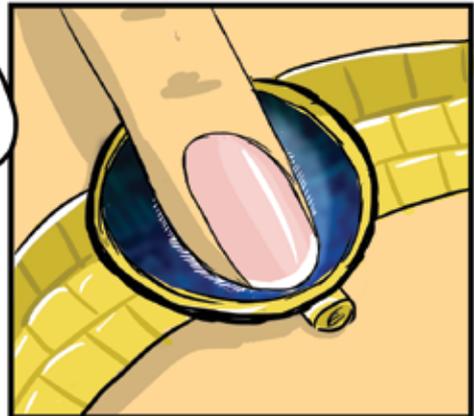
You have four quotes for life cover and six for buildings insurance.

Would you like to proceed with the recommended offers?

YES.

Funds have been transferred to a custodial account. Awaiting confirmation of the property deeds

I JUST NEED A FINGERPRINT SIGNATURE ON THE CONTRACTS AND I'LL RELEASE THE DEEDS.



10.50 AM.
MARIA JUST BOUGHT
HER NEW
APARTMENT



INTRODUCTION

The initially striking thing about Maria's story is how quick and hassle-free buying a house could become.

But financial services executives will be struck by other features of the story. They will see the price transparency and the number and variety of firms involved in the transaction – the financial manager, the credit bureau, the mortgage providers, the life insurers, the P&C insurers – all sharing data seamlessly. No supplier “owns the customer” and each performs only a small part of the total transaction. This is what we mean by financial services becoming “modular”.

Is this where the financial services industry is headed? Will it be transformed from a collection of vertically integrated, one-stop-shops to a variety of firms competing at a variety of points along the value chain?

Parts of the financial services industry already look like this model: US retail banking, some P&C markets and institutional banking, for example. But there are reasons to believe modularization will go significantly further and become more widespread.

Customer loyalty to financial institutions has been eroding since the 1990s, with the advent of monolines, direct banks and direct insurance. The digital revolution has reinforced this trend by massively reducing search costs for customers. What once would have taken hours of phoning providers or visiting branches now takes a few moments in front of a computer or mobile phone looking at an aggregator platform or price comparison site.

The digital revolution also threatens to unravel the supply-side of financial services. Financial services are “information businesses”. Their products are not physical objects but primarily contracts and advice, and their success depends on their skill at processing information and making good decisions. As data becomes radically easier and cheaper to acquire, store, transfer and analyze, more specialist business models become viable. Not only can they operate efficiently but they can seamlessly plug into the supply chain. Hence the visible rise of the Fintech sector, especially in payments.

At the same time that technology is changing financial services, so is post-crisis regulation. Increased capital requirements and compliance costs are making certain lines of business uneconomic for regulated firms. Loan funds and marketplace lenders are moving into markets from which banks are withdrawing, such as small business and near-prime lending. Similarly, wholesale insurance has seen an influx of alternative capital.

New rules are also weakening financial firms' grip on their customers. Seeking to increase competition and transparency, regulators are limiting product bundling and ancillary sales, dictating fee and commission structures and requiring the data about customers' history to be made available to competitors. Regulation is pushing in the same direction as technology – towards ease of switching and competition between providers.

How will these forces play out? How far will the financial industry modularize? Which parts of the business are most easily defended by today's banks and insurers? And how much value is at stake? These are the questions we aim to answer in the rest of this annual Oliver Wyman report on financial services.

Modular financial services may be an alarming prospect for today's firms, especially those who are now vertically integrated "manufacturers"

and have loyal – or at least inert – customers. Yet, properly managed, established firms can benefit through access to more customers, improving their offering, lower operating costs and a shift of resources to areas of strategic strength. For new entrants to banking and insurance, an industry with roughly \$5.7 trillion of revenues, the opportunities are more obvious. Even more obvious are the gains to consumers, who can expect financial services to be faster, cheaper and better.

Exhibit 1: Changes past, present and future in financial services

SHOCK	ALREADY OCCURRED	HAPPENING NOW	IN THE FUTURE?
Changing customer expectations	<ul style="list-style-type: none"> • Willingness to purchase from variety of providers • Weaker trust in traditional financial services firms 	<ul style="list-style-type: none"> • Desire for clean interfaces • Rapid search and easy price comparison • Lower use of branches 	<ul style="list-style-type: none"> • Frictionless product opening • Optimized financial management • Integrated financial and lifestyle services
New technology	<ul style="list-style-type: none"> • Internet channels for customer info, purchasing 	<ul style="list-style-type: none"> • Mobile and apps • Big data analytics • Peer to peer platforms 	<ul style="list-style-type: none"> • Artificial Intelligence / predictive data • Genetics • Internet of things • Distributed ledgers
Tighter regulation	<ul style="list-style-type: none"> • Tightening of capital (Basel I) • Risk adjustment of capital (Basel II, Solvency I) 	<ul style="list-style-type: none"> • Leverage and funding restrictions (Basel III) • Tightening of capital (non-bank SIFI, G-SII, Solvency II) • Stricter conduct rules 	<ul style="list-style-type: none"> • Customer ownership of data • Open customer access for product providers
New competition	<ul style="list-style-type: none"> • Supermarkets • Direct insurers • Price comparison sites • Rise (and fall) of online-only banks and monolines 	<ul style="list-style-type: none"> • Fintech start-ups • Challenger banks • Original equipment manufacturers • Telecoms groups 	<ul style="list-style-type: none"> • Infotech giants • Online retailers



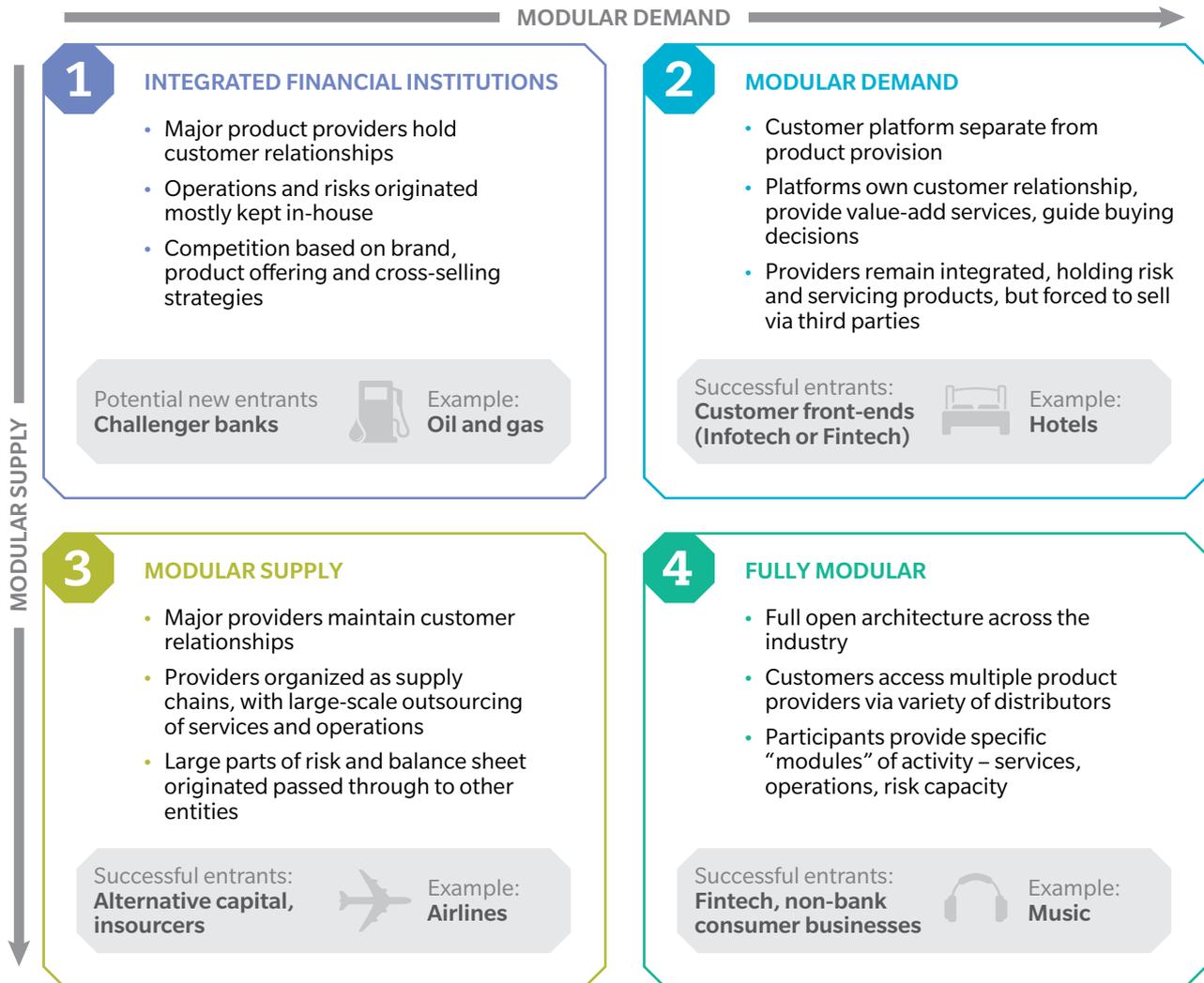
A MODULAR INDUSTRY

Financial services can be modular in two senses. Modular demand means that product providers no longer own the direct customer relationship, with clients easily picking and choosing from multiple providers, perhaps with the help of a mobile application, aggregator or online platform. Modular supply occurs when the supply chain is not delivered in-house, when parts of production are performed by different firms.

We can therefore characterize four broad industry structures, as shown in Exhibit 2.

The forces described in the introduction have been around long enough for some modular industry structures to have emerged. Indeed, entire lines of business in some countries are already highly modular. In general, however, the financial services industry has not been radically transformed in the way that, for example, the travel and music industries have been. In other words, much of the industry still conforms to the integrated structure (see Exhibit 2).

Exhibit 2: Financial services industry structures



1

Integrated financial institutions

In an integrated market structure, major product providers own the full value chain, including the customer relationship (distribution) and all major parts of “production”.

Given the growing importance of digital platforms in distribution, this will be sustained (or achieved) only if financial services providers win the battle to provide customers’ “trusted platform”: that is, the main point of contact through which they get access to the full range of financial services (see “What Next?”).

Despite pressure on the integrated model, it remains relatively common, particularly in Europe and Asia. Many consumers continue to hold deposits, credit cards, mortgages and loans with one bank. Many life insurers continue to have tied distribution forces and “control” the customer relationship, the underwriting, the product suite and the service. In corporate banking, firms have stable and reciprocal relationships with their core lending banks. Hedge funds use their prime broker for a broad range of fund services and execution.

2

Modular demand

With modular demand, providers no longer have strong relationships with customers. Customers instead access a wide array of product providers, via intermediaries or directly from multiple firms. They buy on a case-by-case basis rather than on the basis of a relationship with any one supplier, and cross-selling becomes difficult.

This industry structure has long existed in commercial P&C and is increasingly common in personal P&C. In some markets, notably the UK, there has been a significant shift to aggregator channels (comparison sites), driven by aggressive marketing. Providers’ margins have contracted as a result. Securities markets also have modular demand. Participants can access the best price and liquidity via electronic multi-dealer platforms, with dealers increasingly forced to compete for flows transparently and anonymously.

3

Modular supply

In this structure, firms may have powerful brands but they do not operate (all of) the supply chain that delivers the product. Their customers should not notice the difference, with all the third party input being behind the scenes – or “below the wing” as it is put in the airline industry (see Box 1).

Third-party suppliers are used to create scale efficiencies or to access expertise that is too difficult or too costly to build internally. For example, fund managers can buy almost all support services separately (custody, research, fund administration and others alike), mixing and matching based on specific needs across asset classes, jurisdictions and value chain segment.

Modular supply is also driven by risk and balance sheet factors, with assets shifting to investors who can hold them at a lower all-in cost. Regulation and government policy, such as the creation of mortgage agencies in the US, are major drivers of modular balance sheets. In insurance, large pension plans have increased their appetite for P&C risk and have become significant providers of capital. Life insurers are also looking to third-parties to off-load certain risks which are difficult to diversify.

4

Fully modular

In a fully modular market, customers use multiple suppliers and production is vertically unbundled. The tasks involved in the manufacturing and distribution of financial products are performed by a variety of specialist firms – in distribution, in product design, risk analytics, back-office operations, payments, balance sheet management and the like. These firms will often specialize in particular customer segments and products. They may also leverage existing commercial platforms, particularly e-commerce to offer targeted products and services.

The complexity of the market need not be reflected in the experience of a customer using a multi-supplier platform. Nor need the vertical disintegration of the suppliers’ manufacturing process be visible to the consumer. For example, the role of Fannie Mae and credit ratings agencies are largely invisible to American mortgage holders.

INTEGRATED FINANCIAL INSTITUTIONS

Case study: US credit cards

From the 1980s through to the mid-2000s a large portion of US credit card business shifted from retail banks to monolines, such as Capital One and MBNA, who used advanced analytics to target marketing at high-value customers.

Lacking banks' ability to fund with deposits, monolines funded themselves by securitizing their receivables. This model worked well up to the mid-2000s while appetite for such securities was strong and the wholesale funding markets were liquid.

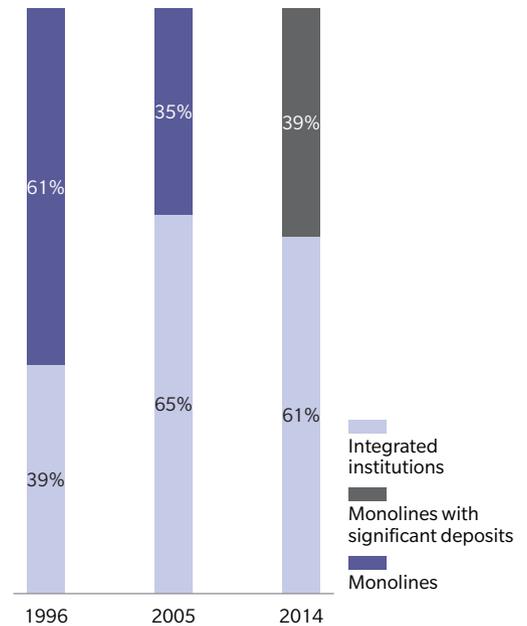
The financial crisis spelt trouble for the monolines. Surviving brands diversified into deposit taking businesses, were acquired by a deposit-taking bank or vice-versa. For example, Capital One acquired Hibernia National Bank and North Fork Bank, and MBNA was acquired by Bank of America.

Cards have thus gone full circle and are now part of integrated financial institutions.

LESSONS

- Modularization can be cyclical rather than secular; forces that encourage it may come and go (in this case, capital market liquidity)
- Expertise is not all. The statistical marketing skill of the monolines was ultimately trumped by the greater advantage of having a large and stable source of funds from retail depositors

Share of top 10 US credit card providers by purchase volume



Source: Nilson

MODULAR SUPPLY

Case study: fund management

Fund managers have traditionally outsourced major parts of their back office operations to custodians and fund administrators. These have become relatively commoditized activities, with managers picking providers based on specific needs.

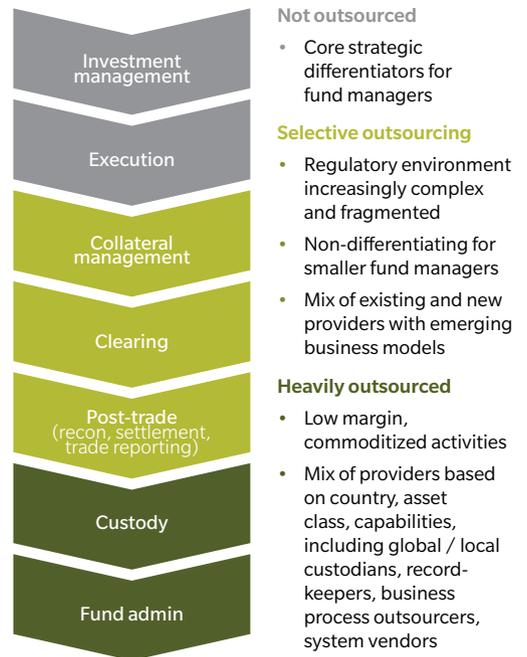
Increasingly, managers are also looking to outsource significant portions of their middle office, as emerging regulations (for example derivative post-trade and collateral management – EMIR, MiFID II, Dodd-Frank) impose significant compliance costs in non-strategic areas.

In response, traditional providers are expanding their product offering. While some of the larger providers look to develop these new services in-house, others are building partnerships with other specialists to offer a comprehensive bundle to their clients. Examples include the SocGen-Broadridge-Accenture partnership in middle office outsourcing and the Markit-Genpact offering in know your customer (KYC) services.

LESSONS

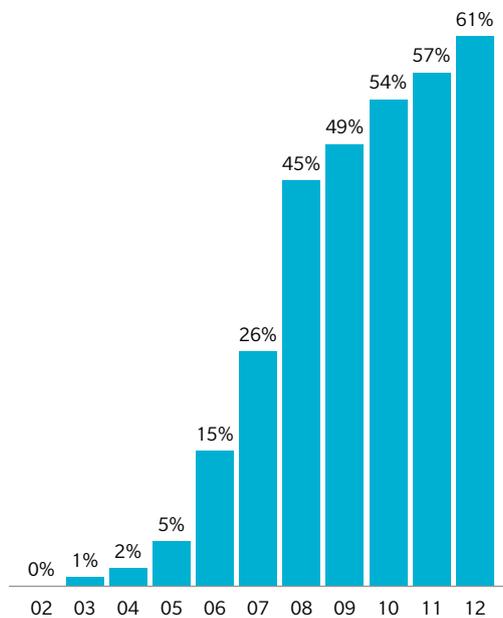
- Margin and regulatory pressure are often the triggers for large-scale modularization of non-strategic capabilities
- Managing an ecosystem of providers requires a distinctive skill set. There is often an opportunity for firms that can “re-bundle” capabilities and offer a seamless experience for clients

Degree of outsourcing across the fund management support value chain



2

Aggregator share of new business in UK personal motor insurance



Sources: GfK survey, Merrill Lynch, eBenchmarkers, Datamonitor, Oliver Wyman analysis

MODULAR DEMAND

Case study: European P&C personal line insurance

A significant portion of European P&C insurance is now sold through aggregators. The trend is most advanced in the UK, where brand loyalty was eroded in the 1990s as new direct insurers poached customers from the incumbents with convenience and discounts.

Since then, aggressive marketing has driven a further shift to aggregators. In 2011, the “Big 4” aggregators spent £93 million on advertising alone. British consumers have learnt that price comparison benefits them. Existing insurers, on the other hand, have suffered: about 25% of policyholders now switch to another provider every year, and their share of policies held has fallen by ~10%.

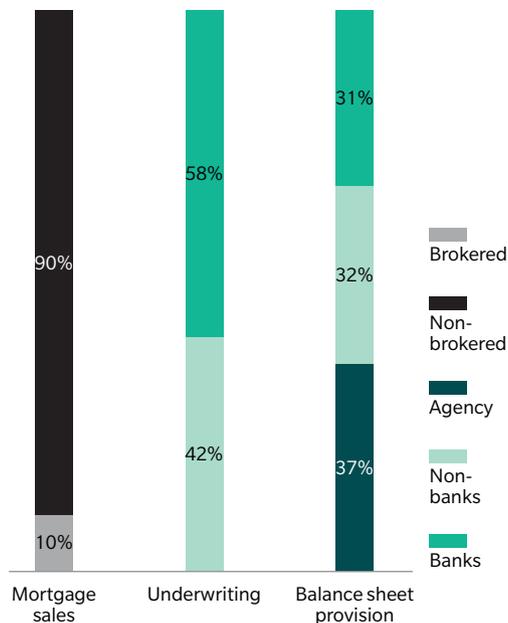
In contrast, the aggregator market share in Germany has grown slowly. This is partly the result of regulation, which in Germany, unlike the UK, allows P&C policies to automatically renew. Aggregators must also compete with stronger agent networks in Germany than the UK, these networks being linked to admired car manufacturer brands.

LESSONS

- Distribution platforms are advantaged where products are relatively simple and commoditized, encouraging customers to shop around
- Subtle regulatory differences can significantly impact the business models of distributors and providers

4

Share of US mortgage sales, underwriting and balance sheet provision 2014



Sources: Federal Reserve, Inside Mortgage Finance

FULLY MODULAR

Case study: US mortgages

The US mortgage market has long been characterized by modular supply. Fannie Mae and Freddie Mac enable a robust secondary market with 70% of mortgage assets held by non-banks. US mortgage assets are attractive to investors all over the world.

This has allowed various different iterations of modular demand to develop.

Pre-crisis, banks actively sourced customers via brokers while retaining the underwriting.

As banks withdrew from origination, in part due to increasing regulatory and legal burdens, new non-bank competitors have emerged with direct distribution. Quicken, the largest online lender, now originates more mortgages than Bank of America.

LESSONS

- Balance sheet fragmentation, especially in mortgages, is often driven by government policy
- Not all forms of modularization are sustainable. Ultimately the lack of effective risk management at origination led to the crisis, and spelled the demise of the broker-led origination model

BOX 1: MODULAR SUPPLY IN AIRLINES

In the early 1990s, the European airline industry was in an equilibrium dominated by national flag carriers. Regulatory liberalization opened the market to new competitors such as Ryanair and EasyJet, who brought with them new management techniques, including quick plane turn-around and dynamic seat pricing. The same phenomenon occurred in the US following the 1978 Airline Deregulation Act, promoting competition from airlines such as Southwest in domestic flights.

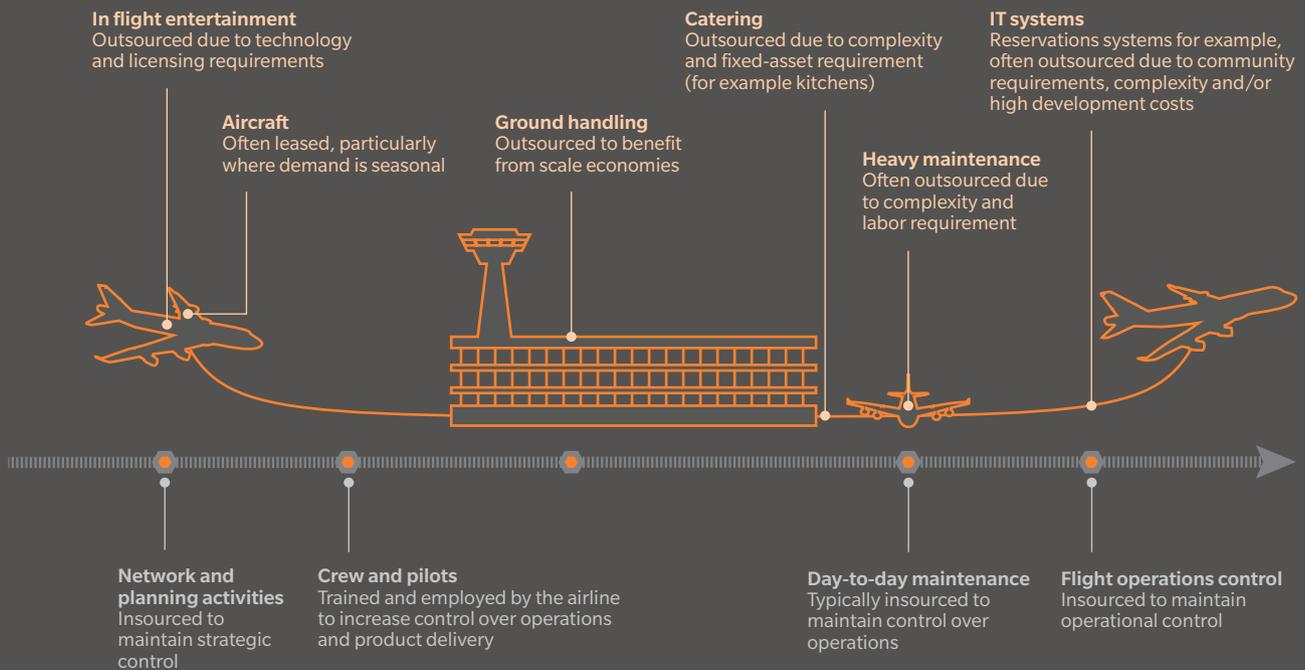
Incumbents found themselves facing extreme price competition. Those that survived were the quickest to adopt radical new delivery models. They outsourced

large parts of their value chain, most notably “below the wing” services. They code-shared to expand their networks without increasing costs. They leased rather than bought new aircraft. They merged to increase scale and reduce unit costs. They also pushed back against modular demand by introducing loyalty schemes, corporate programs and packaged travel services.

From a customer perspective, the disruption has been advantageous. Reduced costs have made air travel accessible to a much larger portion of the population. The success of the new entrants has been achieved less by stealing market share than by creating demand.

Exhibit 3: Airline outsourcing and insourcing of operational activities

OUTSOURCED ▼

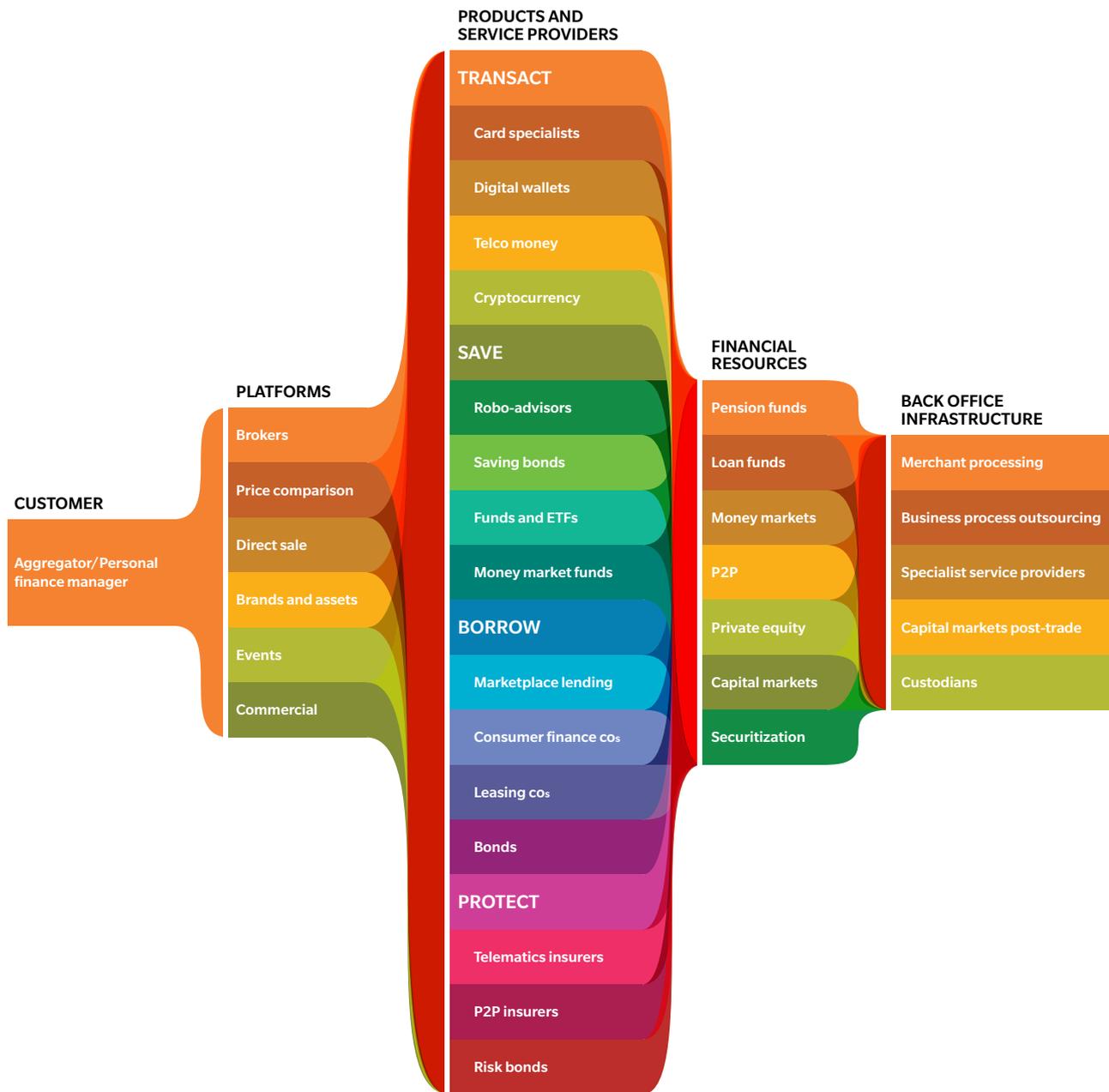


IN-HOUSE ▲

In a fully modular industry structure, it is feasible for a customer to get all of their financial services needs met without the involvement of any traditional financial institutions. Of course,

banks and insurers will in reality compete in all of these modules, often successfully. But they will be competing with a wider range of players.

Exhibit 4: A fully modular future?



WHAT NEXT?

Will modular financial services spread from markets like the US to the rest of world? How far could things go in markets where it is already advanced? Will regulators accelerate or hinder further shifts? These are the questions addressed in this section.

To make the task manageable, we consider what looks likely in the three basic components of the value chain: the customer platform, product provision and back office operations.

The future of financial services is often characterized as a fight for the customer. Given the multiples the market gives to profits in these activities, this is understandable.

Specialist customer platforms attract a P/E ratio of 35, compared to 14-17 for a sample of integrated financial institutions.

And, in many products, value really does accrue to distribution, particularly where firms have privileged access to customers. However, defensible business models exist across the value chain. Many product providers have strong brands, structuring expertise and privileged data. This data is increasingly valuable and being used to drive smarter marketing. The informational value of a credit card, for example, comes from its ongoing use, not from its origination. Similarly, back offices require scale, have large barriers to entry and

Exhibit 5: Simplified financial services value chain

	CUSTOMER PLATFORM	FINANCIAL PRODUCT PROVISION	BACK OFFICE
Activities	<ul style="list-style-type: none"> Marketing Advisory Product range management Onboarding / AML checks Research 	<ul style="list-style-type: none"> Approval decision, underwriting Product design Capital, balance sheet, risk taking Risk management Payments services 	<ul style="list-style-type: none"> Record keeping Policy administration Statementing, collections Claims processing Transactions processing
Revenue generators	<ul style="list-style-type: none"> Customer advice Brokerage fees 	<ul style="list-style-type: none"> Execution fees Net premiums Net interest margin, spread Underwriting profits 	<ul style="list-style-type: none"> Outsourcing fees Internal budget allocation
Specialists	<ul style="list-style-type: none"> Price comparison and aggregators Trusted third party brands (supermarkets, telco, manufacturers, utilities) Brokers and robo-advisors Other customer portals 	<ul style="list-style-type: none"> Shadow banks (loan funds, REITs) Consumer finance companies Peer-to-peer lenders Alternative payment providers High frequency trading Alternative capital in insurance 	<ul style="list-style-type: none"> Business process outsourcing firms Other servicing providers (mortgages, insurance claims) Capital markets post-trade Merchant processing providers
P/E ratio (trailing 12 months, 2014) ¹	Top 10 banks: ~x17 Top 10 insurers: ~x14 5 selected aggregators: ~x35		5 selected BPOs: ~x25

1. **Banks:** Wells Fargo, JP Morgan Chase, HSBC, Bank of America, Citigroup, Commonwealth Bank of Australia, Banco Santander, Westpac Banking, Mitsubishi UFJ Financial, Royal Bank of Canada.
Insurers: Allianz, AIA Group, American International Group, Prudential, Axa, Metlife, Zurich Financial Services, Munich Re, Ace, Prudential Financial.
Aggregators: Money Supermarket, Priceline Group, Check 24, Intuit, Expedia.
BPOs: FIServ, Genpact, Tata Consultancy Services, Infosys, Wipro Technologies.

BOX 2: ATTRIBUTION OF VALUE TODAY IN TWO MARKETS

Relative value: ■ High ■ Medium ■ Low/destructive

UK mortgages: banks with material advantages in balance sheet provision

	CUSTOMER PLATFORM	FINANCIAL PRODUCT PROVISIONS	BACK OFFICE
Drivers of value	<ul style="list-style-type: none"> Low frequency acquisition Marketing and advice regulated; stringent conduct requirements Difficult to differentiate offering without large marketing spend 	<ul style="list-style-type: none"> Large banks are advantaged providers of balance sheet <ul style="list-style-type: none"> Cheap retail deposit funding A-IRB enables greater leverage 	<ul style="list-style-type: none"> Relatively little back office processing required Processes are standardized and commoditized, with at-scale service providers operating at modest margins
Est. profit before tax	~£0.3-0.5 billion	~£12-13 billion	~£0.7-0.9 billion
Est. economic value (PBT less tax and cost of capital)	~<£0.5 billion	~£7 billion	~£0.4-0.6 billion

Wholesale FX: value in distribution under pressure, with excess capacity in the back office

	CUSTOMER PLATFORM	FINANCIAL PRODUCT PROVISIONS	BACK OFFICE
Drivers of value	<ul style="list-style-type: none"> Scale and capabilities required to provide access to wholesale markets However, shift to MDPs eroding margins by increasing transparency and competition 	<ul style="list-style-type: none"> Competitive environment; trading gains only marginally higher than costs of trading plus capital costs Technology a key differentiator, hence non-bank market makers Some value in product structuring, but small market 	<ul style="list-style-type: none"> Mainly standardized, low-value-add processes Overall value destructive due to excess capacity and use of costly legacy systems
Est. profit before tax	\$2.5-3 billion	\$2 billion	-\$0.6 billion
Est. economic value (PBT less tax and cost of capital)	\$0.5-1 billion	\$0-0.5 billion	-\$0.4 billion

Note: Size of value pools estimated from proprietary Oliver Wyman data. Split of value across value chain estimated based on pricing data, estimated allocations of costs and revenues within integrated firms, as well as the economics of specialist business models.

can be profitable, stable activities. Specialist back office providers, with no major capital or balance sheet risks, can attract P/E ratios of 25.

The future of the customer platform

Over the coming five to ten years a next generation of digital services will solve customer hassles, removing friction from daily lives, business and investment. These services will go far beyond the basic aggregators and apps available today. They will place powerful financial management tools of the kind now used by major corporates and institutions in the hands of consumers and small businesses.

A race is underway to build platforms which provide a cluster of services under one umbrella, with data-sharing and a frictionless overall experience. Several kinds of platforms are emerging, each with its distinctive entry point:

- **Event-based platforms** These will deliver an integrated pathway to support a major life event, such as buying a house (as in the story of Maria with which we started this report). While today we have property portals with clunky click-throughs to mortgage websites, we expect to see property search with virtual technology integrated with conveyancing, underwriting and financing
- **Large commerce platforms** E-commerce and supermarket platforms are being extended to provide financial solutions integrated at the point-of-sale. These will give consumers and businesses one-click access to consumer credit, merchant cash advance, trade finance and FX solutions
- **Personal financial management platforms** These will be segment-specific, focussed on life stages (students, families, retired) and income levels (high net worth, mass affluent). Platforms will combine financial planning tools and advice. Killer apps will provide dynamic switching between savings or loan products, ensure insurance cover is updated in line with recent purchases and provide targeted “couponing” based on transaction patterns
- **Business services platforms** These will provide segment-specific services for businesses, such as property managers, retailers, sole-traders and import-exporters. Rich functionality will support e-invoicing, tenancy services, automated tax return apps, government procurement and much more. Finance and insurance solutions will be integrated seamlessly
- **Brand affinity platforms** A wide range of organizations with loyal customer bases – social media groups, telecommunications, sports clubs – will create services and functionality with potential links to financial services, particularly for payments

- **Asset based platforms** Personal assets (for example cars and boilers) and corporate assets (for example factories and machinery) will have platforms linked to ongoing servicing, enriched by telematics. Financing, leasing and insurance can easily be bundled into these offerings

Digital platforms will be competing for origination with direct customer access and standard product comparison platforms. Attempts to bundle financial services with other products and services have a mixed record. Success will need platforms to eliminate customer hassles, provide unique functionality, and offer wider choice, lower prices or greater speed.

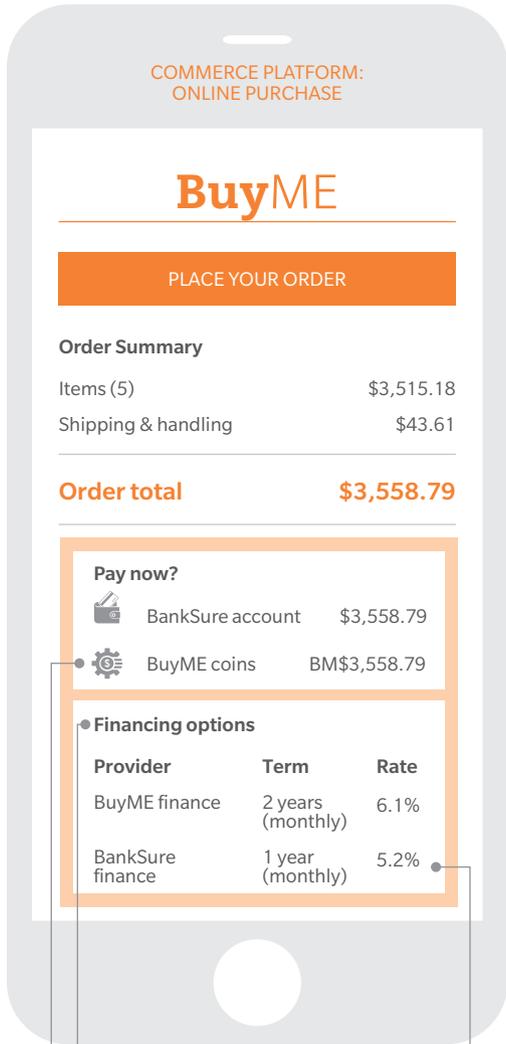
Banks and insurers are well positioned to deliver compelling customer platforms. They benefit from a large number of pre-existing financial relationships, wide distribution reach and privileged access to data about customers, including their credit quality, type of employment and life cycle position. They can offer a highly secure “walled garden” where customer data is closely managed and transactions safely executed. They can also integrate platforms with a slimmed down physical network including sales agents, relationship managers, branch networks, and even direct mail.

To succeed, existing firms will need to keep up with services on independent platforms and, if needed, offer competitors’ products. Customers need to know they are getting good advice and a competitive offering.

Regulation may deter independent firms from providing the full functionality that their platforms could in theory deliver. Steering customers to specific products or facilitating dynamic switching from one product into another will usually require a platform to obtain regulatory approvals and to accept responsibility for consumer protection and anti-money laundering compliance.

New customer platforms are unlikely to earn significant amounts from retail customers directly given the expectation of “free” services. Instead they will seek to charge commissions to the product provider. In industries where this has occurred, customer platforms are able to charge 5-15% commissions, and even up to 30%. The largest revenue pools at stake will be in markets where products are standardized and where price and value are unclear to customers, such as personal line P&C insurance and tied retail banking distribution. We estimate that new customer platforms could capture \$50-150 billion of revenues from today’s banking and insurance markets. This is equivalent to several eBays or 1-2%+ of banking and insurance revenue today.

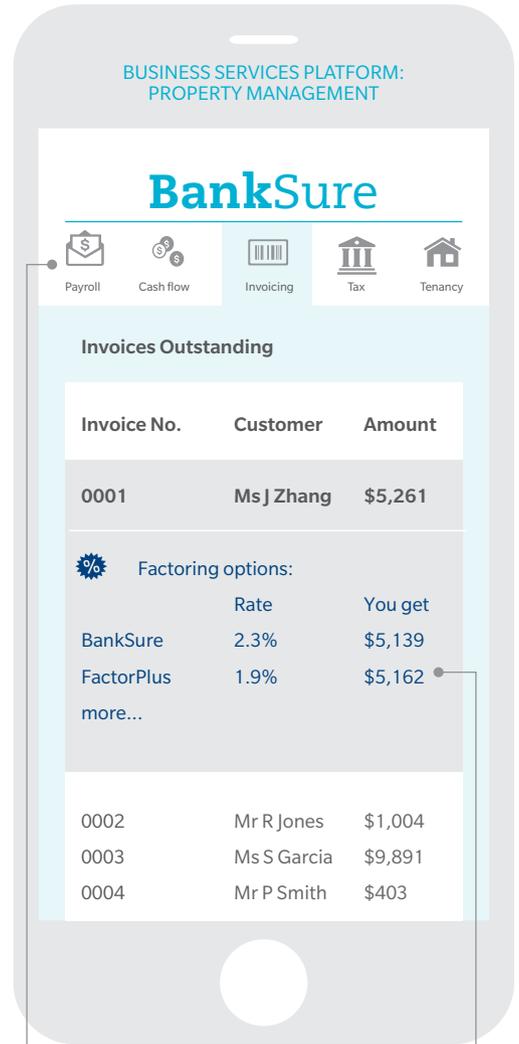
Exhibit 6: Trusted platforms for consumer financial services



Platform provides customer details (pre-permissioned) to the market

One click account opening, platform provides AML/KYC data required

Platform seeks to perform broad payment services



Range of integrated digital services to improve business efficiency

Financial products integrated into e-commerce services with full transparency on pricing

The future of financial product provision

The success of customer platforms will increase competition in product provision. When gaining access to customers is no longer a barrier to entry, products can be designed for very specific needs or customer segments and reach the whole market. Whereas a standard product could once be sold to captive customers, product providers will need to be excellent. New supply-chain configurations can be created, including alternative capital providers who may face radically different regulatory burdens, funding costs or diversification effects.

Existing product providers are at risk wherever customer needs are unmet and where there are excess returns, costs or regulatory capital requirements.

Banks could look to the regulated balance sheet for a highly defensible advantage. Government deposit insurance continues to give banks access to low-cost funding and banks can still sustain very high leverage ratios (whereas the ratio of assets to capital remains in excess of 25:1 at banks, non-banks rarely have leverage ratios in excess of 5:1). For low-risk assets requiring high leverage to make a return, bank funding will be hard to beat. However, the return from this kind of balance sheet “utility” will be acceptable only when there are very few scale players in a market.

Where higher risk and return assets are concerned, a regulated bank balance sheet is no longer such an advantage, partly on account of increased regulatory capital requirements. Low investor returns elsewhere have supported the growth of loan funds and marketplace lending in lines of business such as SME and near-prime.

Exhibit 7: Sources of disruption in financial product provision

DRIVERS	EXPLANATION	DISRUPTED / AT RISK?
Unmet needs	<ul style="list-style-type: none"> Customer need not well met New products meet unrecognized need 	<ul style="list-style-type: none"> Point of sale SME lending Financing of trade flows? House purchases?
Inefficient cost structures	<ul style="list-style-type: none"> High-cost, inflexible legacy systems New technology allows lower cost delivery 	<ul style="list-style-type: none"> Personal lines insurance Reinsurance Traditional asset management? Correspondent banking?
High capital usage	<ul style="list-style-type: none"> Lower capital models Lower return expectations of new entrants 	<ul style="list-style-type: none"> Sub-prime lending (funds, marketplace) Catastrophe insurance Fixed income sales and trading?
High returns	<ul style="list-style-type: none"> Pricing of some segments cross-subsidizes others Bundling allows high margins 	<ul style="list-style-type: none"> Low risk insurance segments Embedded FX in payments

Many insurers and pension funds, whose long-term liabilities make them the lowest risk holders of long-term assets, have looked to expand their allocation to credit.

Insurers themselves face similar competition from alternative capital providers, many of whom are willing to accept lower returns because of diversification benefits. We expect continued worsening of the already difficult environment for current suppliers of risk capital.

In a world where risk-taking and funding capacity are commoditized, where can competitive advantage be generated in providing financial products?

- **Advantaged access to data** Privileged data sets from other product relationships will continue to support smarter credit approval and targeted marketing. Regulation such as Europe's PSD2, may undermine incumbents' data advantages but a truly open data environment is unlikely for some time
- **Superior analytics** As well as collecting better data, many insurers and lenders are locked in an analytics arms race to target and price customers better. Advanced suppliers can enjoy superior returns but need to continually innovate to stay ahead
- **Managing value** New ways of influencing behavior are being developed to make customers or long duration products more valuable: for example, using telematics to encourage motorists to drive more carefully
- **High service levels** These will remain a differentiator for more complex customers and product needs, whether in corporate finance, risk management,

investment structuring or high-net worth financial management

Competitive advantage in financial product provision will come from the ability to deploy capital in a smart way – to avoid becoming a utility-like supplier of balance sheet or risk capital. New capital providers are not the enemy in this endeavor. Rather than attempting to defend low return assets to retain market share, banks and insurers are positively seeking out alternative capital providers willing to buy these assets, thereby profiting both parties.

The key barrier for alternative providers will be the regulatory and policy environment. New rules would be needed to support a radical new payments system. Bankruptcy and tax law need to be simplified and harmonized to clarify the position of alternative capital providers. And clear rules regarding data ownership are needed to enable big data analytics. Regulation now offers today's providers some protection from disruption. Given the recent rate of regulatory reform, however, this is not guaranteed to last.

Innovative business models will succeed where technology drastically alters the cost of provision by circumventing expensive legacy infrastructure (for example in payments), where analytics allows superior customer targeting and pricing (telematics in P&C insurance or robo-advisory for insurance savings products) or where new providers satisfy unmet customer needs (such as SME lending). We believe it is realistic for new business models to capture \$150-250 billion of existing revenues. Whether this accrues to new entrants will depend upon the willingness of existing providers to develop alternative models and challenger brands.

Increased competition will also drive margin compression. We estimate that \$150-300 billion of value may migrate to consumers by way of lower prices. This is equivalent to a 3-5% reduction in industry revenues, with the segments where margins are richest potentially seeing far greater compression. Consumers will unquestionably be winners as these shifts occur, benefiting from better quality, a broader range of offerings and lower prices.

Aside from these shifts in existing revenues, modular financial services can unlock growth. In many markets financial deepening is still low and customer needs are only partially met. For instance, we estimate that only 15-20% of insurable risks which customers bear are actually mitigated. The main reasons are a lack of information, high costs of service and administration and insufficient product tailoring. An industry with specialist product providers and new distribution channels will tackle these issues and unlock new opportunities.

The future of back office operations

Back office efficiency will become increasingly important as customer and product trends narrow margins. Firms will need to be able to launch new products quickly and provide a slick customer experience.

At an industry level, back office operations remain inefficient, for two main reasons.

The first is over-capacity. Large banks and insurers generally maintain their own back offices. Some unbundling has occurred, through outsourcing to players

with greater scale or skills, but this varies from market to market and accounts for less than 15% of global back office costs. There remains widespread duplication of undifferentiated activities.

The second reason is that many firms in mature markets are operating with core systems that are over 25 years old or the result of firm mergers. Inflexible systems drive up costs through the proliferation of “bolt-ons”, ongoing maintenance and manual processes or “work-arounds” they require.

The answer for many firms will be to outsource increasing amounts of their back office. This will be easiest for standardized, undifferentiated processes such as loan payments processing or high frequency, standardized claims management in P&C insurance. As specialist outsourcers proliferate, the range of activities that can safely and profitably be outsourced will grow.

Some US firms, such as Quicken, already operate as “supply chain managers”. Large parts of the production chain are conducted by outside suppliers. These include not only simple back office functions but value-added services, such as predictive analytics for lending products or specialized fraud analytics for insurance products. These smart servicing solutions may remove the need for further downstream processing and, therefore, the demand for traditional outsourcing of standardized processing activities.

Large incumbent institutions face a more complex set of choices. They are at-scale and they can recruit staff with the required skills. For these firms, and others in complex lines of business, the back office can represent a source of competitive advantage. Indeed, they

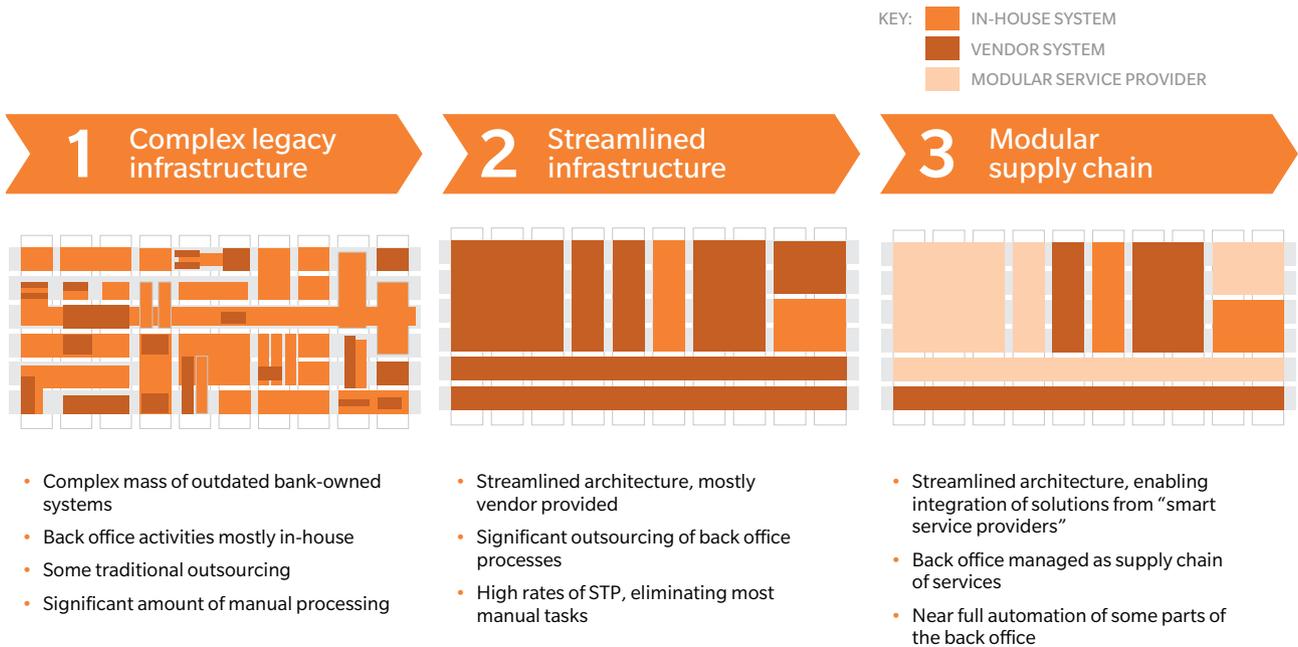
may see their back office platform as a service provider for others in the industry, as with ABN Amro's Stater mortgage processing platform. The operational risks from outsourcing, especially the cyber risks created by passing data to third parties, may outweigh the potential cost reductions.

Many large financial firms will therefore face the major challenge of "re-platforming": that is, of completely overhauling their internal operating systems. The upside is compelling, with reduced ongoing IT spending, increased straight-through processing, greater ability to outsource services and lower operational risks. Banks' costs can fall by a quarter where this is done successfully. The potential cost savings from completely re-platforming the top 250 largest banks is a massive \$340 billion.

However, the task is enormous. For the largest universal banks, it involves upgrading everything from the general ledger through to the front-to-back trading systems and core deposits processing. The transformation can cost \$4 billion or more. With returns currently subdued and average dividend payouts for the largest 100 universal banks at \$1.7 billion¹, re-platforming may require banks to suspend dividend payments for one to three years.

The execution risks are high. Core banking systems cannot be switched off for repairs, and they can take 5-10 years to fully upgrade. Financial services firms have a mixed track record in IT implementation and they will face talent constraints. Hanging over re-platforming programs will be the fear that the target model could be obsolete by the time it is built.

Exhibit 8: Back office infrastructure transformation



1. Based on public data: 100 largest companies with primary business classified as banking or investment banking according to size of balance sheet

BOX 3: HOW WILL REGULATORS INFLUENCE MODULAR FINANCIAL SERVICES?

Regulators need to make trade-offs between competition, consumer protection, innovation, systemic stability and the ability to control flows of capital to support broader policy. Modularization has implications for all of these matters and its extent will be affected by regulators’ actions, whether by design or accident.

Some regulatory trends have afforded protection to incumbents. For instance, new entrants need to meet the same strict Anti-Money Laundering and Know-Your-Customer rules or face being quickly closed down.

At the same time, regulation could trigger rapid change. New customer protection and conduct rules have rendered some business models obsolete. Competition is being promoted and opaque sales practices punished. The growth of shadow banking and alternative capital in insurance has so far been allowed to continue.

Technological innovation may run ahead of regulators’ ability to analyze its effects and to draft and implement responses. While market participants would like regulators to be able to establish a framework in advance, the more likely outcome is a watching brief that responds to major events.

Exhibit 9: Regulatory triggers for modular financial services

TRIGGER POINT	FOR	AGAINST
1. Ruling that customer data must be made available to other providers on request	<ul style="list-style-type: none"> Creates level playing field for providers Fairer consumer pricing 	<ul style="list-style-type: none"> Legal ownership of data varies by jurisdiction Potential for some consumers to lose
2. Allowing customer platforms to open accounts on behalf of customers	<ul style="list-style-type: none"> Allows consumers to access more products and better manage financial needs Increases competition, supports best execution 	<ul style="list-style-type: none"> Transfer of conduct risks to less experienced, potentially sub-scale firms Consumer cybersecurity risks
3. Continuing to allow non-bank provision of capital and balance sheet	<ul style="list-style-type: none"> Releases bank and insurer balance sheet Expands credit availability for SMEs and unbanked 	<ul style="list-style-type: none"> Risks assumed by consumers in lending Inability to monitor leverage and control price bubbles Pro-cyclicality of new credit providers
4. Enabling new payments systems to emerge	<ul style="list-style-type: none"> Consumer convenience More efficient processing rails 	<ul style="list-style-type: none"> Unknown operational and systemic risks Unknown impacts on monetary stability
5. Supporting further third-party provision of back office operations	<ul style="list-style-type: none"> Lower costs passed through to consumers 	<ul style="list-style-type: none"> Cybersecurity risks created by multiple links to third-party vendors Systemic risk from processing concentrated in a small number of providers

Despite the costs and risk, inaction is not a viable option. Inflexible, inefficient legacy systems will be unsustainable in a modular world.

Predicting the impact of modular financial services is challenging. There are dependencies on regulation, customer

behavior and competitive actions. Nonetheless, major positive and negative impacts on the industry are certain. In this section we have identified five value shifts occurring across the value chain. A range of outcomes is possible but, overall, these shifts could total \$1 trillion across the banking and insurance industries.

Exhibit 10: Summary of value at stake for banking and insurance from modularization

\$5.7
trillion

**REVENUE TODAY IN
BANKING AND INSURANCE**



\$2.0
trillion

**BANKING COST BASE
TODAY**



VALUE SHIFT	ESTIMATED SIZE OF IMPACT
CUSTOMER PLATFORMS	\$50-150 billion Revenue opportunity for incumbents or third-party platforms
NEW BUSINESS MODELS	\$150-250 billion Revenue opportunity for innovative product offerings
PRICE COMPRESSION	\$150-300 billion Reductions in cost for customers due to transparency and competition

VALUE SHIFT	ESTIMATED SIZE OF IMPACT
BANK RE-PLATFORMING	Up to \$340 billion Potential cost saving from re-platforming largest 250 banks
SOURCING PROVIDERS	Up to \$50 billion Operating profit opportunity for sourcing providers

Note: for comparability to banking, insurance revenue is defined as premiums net of claims plus investment income

KEY TAKEAWAYS

- 1. The new shape of the industry is emerging and it is modular** It will be more transparent and efficient. It will drive business to best-in-class suppliers and greatly benefit customers.
- 2. Established banks and insurers will still have major advantages** Existing regulatory approvals, KYC and AML capabilities, deposit funding, large customer bases, secure digital environments and multi-channel distribution are formidable barriers to new entrants. This is not the end of the bank or the insurance company, but successful firms will operate alongside new distribution platforms, product providers and suppliers of capital and infrastructure.
- 3. Operating platforms must be transformed** Costly, inflexible legacy processes will be unsustainable in this environment. Banks or insurers that fail to tackle this challenge, either through outsourcing or re-platforming, will generate weak returns, will be unable to respond quickly enough or will be left behind.
- 4. High returns will require something superior to be delivered** Undifferentiated capital and balance sheet provision will produce low returns. Firms that succeed will understand their customers' problems, build solutions, apply analytical firepower to new data sets or create a highly efficient supply chain.
- 5. Firms must identify their strengths** These may lie in the customer interface but could equally be in product structuring, risk analytics, smart capital provision or back office services. The first step towards thriving in a modular world is understanding where a given firm can sustain decent returns.
- 6. Modularity can support many strategies** Having identified their areas of strength, firms should take advantage of the modular industry to invest, expand, partner, divest and outsource to drive profitable growth.
- 7. Historic leadership skills will not be sufficient** A firm's top 200 executives will face different challenges and need a broader set of characteristics. Operating models will have to be redesigned into supply chains, working closely with a wide range of external partners. Metrics will need to focus more on value provided to customers and less on short-term returns. A successful mind-set will embrace change.

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