



**Innovation in Financial Services:**  
The Elastic Innovation Index Report

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January 2015





# Innovation in Financial Services: The Elastic Innovation Index Report

**Abstract:** We were asked to study innovation in the financial services sector using the Elastic Innovation Index. As part of our study, we assessed 150 financial services companies, and, to date, have analyzed 60 of those in detail. This report details the results.

By assessing innovation inputs (or capabilities), as opposed to innovation outputs (new products or new services), the Elastic Innovation Index measures capability and readiness to change rather than measuring what has been achieved in the business execution process. The Index goes beyond the typical focus on the start-up ecosystem as a potential engine of disruptive change to instead examine such possibilities as the structural impact of high-capacity global mobile telecommunications, the availability of high-performance business platforms, new software development techniques, the disruptive power of open-source development communities, and the democratization of communications. By capturing these factors, the Index allows us to question whether financial institutions are capable of the types of innovation demanded by an industry facing significant structural change. To place our findings in context, our study also details what is fueling structural change in the industry and how financial institutions should respond to it.

We conclude that several financial institutions have the capability to adapt to changes in the industry, but many more lag behind and lack an understanding of these imminent changes. Banks need to act at a strategic level more quickly than they realize.

## INTRODUCTION TO THE INDEX

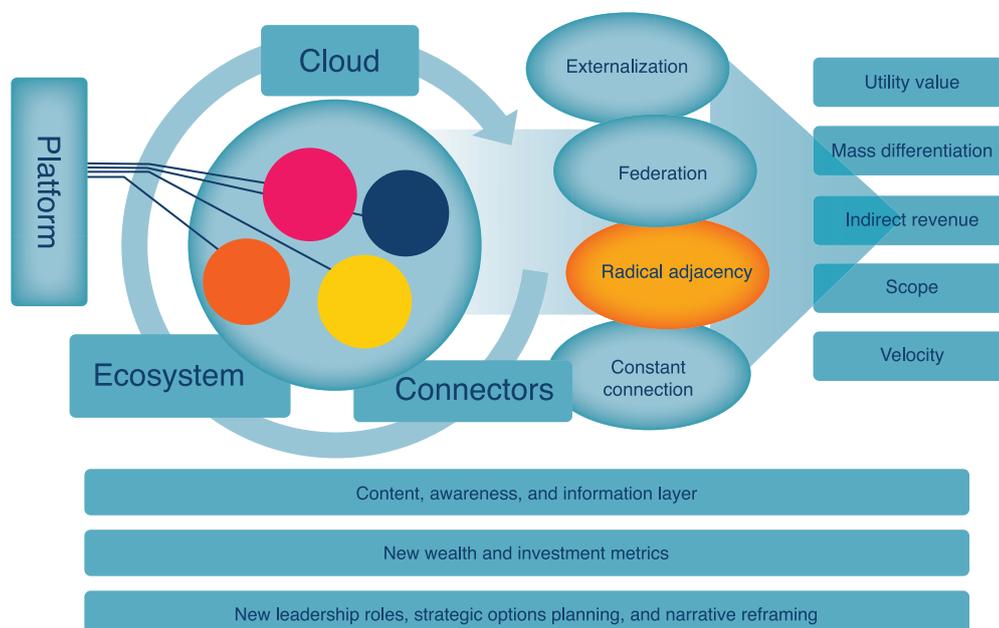
The Index has been used to analyze over 400 companies across different sectors. It began with a multi-sector study of innovation reputation among 5,000 companies on eight different stock exchanges. This meta-study allowed us to establish certain relationships between innovation and a range of success factors, such as the fact that only companies with the highest reputation for innovation (those in the top 10%–15%) enjoy a high correlation between innovation reputation and stock price improvement over time. In other words, our analysis tells us there is a relationship between how people perceive a company's innovation record and its stock price.

There is a likelihood that companies with high innovation reputation are gaining an advantage because of their innovation outputs. And while these outputs have value, we set out to instead analyze the innovation capabilities that lie behind this success—we refer to these as innovation inputs—and measure them in an effort to understand how good companies change the structure and competencies of their business.

The Index is, in fact, meant to reflect a basic change in enterprise operating models, or what are sometimes called process models. Much of the literature in innovation refers to the need for new business models. And while it may be true that new business models are important, the need for them arises because of changes to business processes. For example, downstream revenue sources like online advertising are only available to companies that know how to create community, a process that is entirely new to institutions such as banks. This involves significant process change to facilitate the new business model.

The types of process models that make a company efficient are changing. In the past, enterprise operating models were mostly mapped to the product development and sales process; today, the most effective models are mapped more to managing, accessing, and delivering services at scale via platforms and their ecosystems. This transition actually plays to the basic strengths of banks and other financial institutions.

**Figure 1. The Modern Enterprise Operating Model**



The four most important elements of this new business model are platform, ecosystem, connectors, and the Cloud.

- **Platform:** Companies are using multiple business platforms to manage their businesses and external relationships—and as firms are generally becoming much more externalized, the business platform has an important role managing the complexity of external/internal relationships. Another feature of the platform is that, ultimately, it breaks down vertically integrated industries and brings more opportunity for horizontal entrepreneurship in the form of radical adjacency moves.
- **Ecosystem:** The ecosystem is the sum of organizations and people that are drawn into a major platform opportunity. They are often those parties that are locked out of vertically integrated industries. Eager to innovate, they often have a high appetite for risk and push a more horizontal set of solutions within a largely interoperable technology framework.
- **Connectors:** These are the technologies, like identity management, that enable broader horizontal play. The key benefit of connector technologies, which also include application programming interfaces (APIs) and really simple syndication (RSS), is that they contribute to very low friction and often highly automated business relationships and transactions.
- **Cloud:** The Cloud enables low-cost experimentation. It permits companies to develop a more options-based strategy by providing a set of rentable infrastructure elements, such as databases, computer power, software as a service (SaaS), and platform as a service (PaaS). This helps companies to multiply investments in a portfolio of new options rather than follow a singular, linear strategy; it also enables low-cost scaling of high-opportunity options.

These core elements of the new process model allow new business concepts to evolve that, in turn, lead to different revenue models. They are particularly powerful in allowing companies to adopt a utility position and earn revenues from being outside the competitive arena. Utility revenues have historically been low margin but are increasingly the avenue to monopoly-like and high-margin, or more highly scaled, revenues.

The Elastic Innovation Index is designed to capture a company's capacity to make these types of changes. It provides an overall index of innovation readiness—in essence, a measure of how well companies are set up to enact some form of platform and ecosystem move—by evaluating five main categories of innovation: content, platform, leadership, strategy, and externalization.

### What does the Index not do?

The Index does not reflect innovation outputs like the number or range of new products. As it assumes companies can create new products, the Index instead tries to determine if they can switch direction and move into new product areas.

It does not as yet test for a company's ability to deal with uncertainty through new investment frameworks. We have researched this issue separately and may integrate it with the Index in the future.

## INNOVATION AND STRUCTURAL CHANGE IN THE FINANCIAL SECTOR

Over the past three years, the financial sector has confronted innovation in technology, services, platforms, and, to some degree, organizational structure. The need to innovate is often referenced in the context of disruption; understanding this broad-based disruptive context is essential to judging whether a financial company is responding adequately and is essential in helping executives set strategy. Without such an understanding, many companies will continue to act tactically on innovation—by funding start-ups or new projects—when in reality, they face a structural problem that needs to be dealt with strategically through process innovation.

A useful way to understand innovation in a disruptive context is by reflecting on innovation in the period 1985–2010. Over this 25-year period, many, if not most, manufacturing companies began to deal with innovation at the product and process level simultaneously. They were forced by the competitive environment to create new products, often with a strong service mix; but to do this cost-effectively, they had to redesign their manufacturing, assembly, and supply chain processes. They outsourced manufacturing, research, and logistics and moved to vendor-controlled stock control and Just-in-Time manufacturing and delivery. To achieve these significant process innovations, they created tiers of suppliers and then devolved responsibility for innovation risk onto their first- and second-level tiers, allowing the central organization to become lighter and more flexible. Simultaneously, they invested in new technologies like Enterprise Resource Planning to help control the complexity they created.

A similarly sweeping level change is now taking place, but on a greater scale, extending the need for process innovation to both the front and back offices and also to service organizations such as banks. One driving factor is the closer integration of customers. Today, all enterprises need to develop strong and more reliable connections with customers; integrate customers' usage patterns into service design; bring customer ecosystems



into product and service definition and social media advocacy; work with ecosystems of developer, content, and independent groups; adapt rapidly to new channels; adapt to highly differentiated markets; adapt to the Cloud; shift to downstream revenue sources; and so forth.

In addition to increased customer integration, financial institutions face further industry changes that are creating a need for process innovation. These include:

- 1 The impact of new systems.** Innovations in developing-world payment systems like m-pesa and the introduction of mobile-first money transfer systems through operators like Digicel have created new risk factors for banks. Reverse innovation (innovation in less economically advanced regions) creates pressure for better and cheaper financial services in more advanced regions. But it also creates a more efficient global economy for companies that need geographical expansion to justify their R & D spending or to complete born-global services. The cost of provision in reverse innovation services is typically extremely low. For example, service-infrastructure provider KlickEx offers global money transfer, foreign exchange and inter-bank settlement with a staff of only 14 people. A company like KlickEx can work with bank and non-bank service providers (mostly telecom carriers), introducing a strong source of external competition to banks.
- 2 Alternative platforms as new systems.** At the same time, banks face risk from non-bank platform owners encroaching on banking turf through alternative payment systems, alternative forms of money transfer, alternative currency platforms, automated wealth management, cheaper stock trading, and even new types of money. The most obvious examples of encroachment are Apple and Google, who have user communities of up to 800 million people and growing that they can use as a base for forcing retailer acceptance of their proprietary payment services. In the global apps market, non-bank payment options are also on the increase as telecom carriers opt for third-party payment services like Bango, which almost unseen has accumulated a platform of 200 million online identities with a staff base of just 70 people.

The implicit message in the rise of these new services is that customer identity is a key component in the modern economy. We now see many business-to-business enterprises, such as Intel, developing new end-consumer services simply to secure customer identity data. While banks have a natural—albeit underutilized—advantage in the area of identity, structural change across all industries leaves them vulnerable to competing claims on this precious commodity. Further complicating this advantage, an undercurrent of start-up activity might reverse the data paradigm, giving customers rather than enterprises more control over all data.

- 3 Weak points in the start-up ecosystem.** Banks are establishing captive funds to access the Fintech start-up ecosystem, supporting start-up boot camps, and participating in initiatives like Innovate Finance in London. Accenture estimates that start-up Fintech financing has grown from \$930 million in 2008 to \$2.97 billion in 2013. Notably, the largest portion of Fintech financing goes to Silicon Valley and not to established financial centers; Fintech funding has grown three times faster than venture capital funding overall.

The challenge here lies in integrating whatever comes out of these investments. By and large, transformational enterprises use strategic acquisitions because they have an enterprise context (strategy, culture, distribution) that allows them to quickly integrate and use the technology and skills of multiple start-ups.

Start-up activity has to be used to push competitive advantage and shape structural change in a bank's favor. This relies on astute management taking a long view of how to change a company's position in a market. In order to achieve long-term structural outcomes from Fintech, banks need to think less like in-

vestors and more in terms of the new processes that will give them an advantage and that they can create by building start-ups into new platforms.

**4 The open-source movement.** An often-overlooked aspect of radical innovation is the open-source movement. Mostly to date focused on open-source software, open source dominates the technology infrastructure of the web and many enterprise systems, including the Cloud. It also lies behind new crypto-currencies like Bitcoin. Banks are beginning to explore open source as a resource and are being forced by the pressure of the Bitcoin community to look more closely at crypto-currencies. Yet this isn't enough, as the open-source movement is ripping up the fiat currency assumptions upon which banking is based. In structural terms, banks might do well to realize that crypto-currencies using block-chain technology is a completely different business from the one they are in. It is not simply an alternative to fiat currency; it is a different system of wealth, distribution, responsibility, and trust to which banks are already late entrants.

With the level of change facing banks, it is no longer just a question of whether financial institutions are individually threatened by disruption. The answer to that is simple—yes, they are. The more important questions should be stated as:

- Does the financial industry itself face radical restructuring and hence widely distributed disruption?
- If so, what form will the new industry structure take? And who has the innovative capabilities to retain or gain a profitable competitive position?

Financial services are vulnerable to margin erosion from companies that are now making adjacency moves from other sectors. This is particularly the case with those platform players with strong horizontal capabilities like Apple and Google. Start-ups are also able to make a relatively easy inroad into bank revenue and margins in areas like currency conversion and payments. It seems possible that, gradually, a similar process might take place within investment funds with start-ups and new hedge funds offering far more transparency and lower costs. Equally likely, companies that have residual cash deposits from users will become more bank-like, as is happening with Alibaba and Alipay. Loan businesses are beginning to change through the ability to create new social arrangements, such as peer-to-peer (P2P) lending.

These threats need putting in perspective, though. They are not all *disruptive* in a fundamental sense. As banks are forced into being over-capitalized, the corrosive impact of adjacency moves by large players from other industries and margin erosion from start-ups can be dangerous because it takes only a 2%–3% loss of business for companies to be forced to go on the defensive.

These pressures become disruptive only when a number of other conditions are met that trigger rapid change across the sector. Assessing sectorial disruption in other industries shows that there can be a pattern of disintegration that leads to a broadening base of suppliers, a different basis for customer relationships, and new oligopoly players emerging from adjacent industries. It typically includes radical price reduction and some structural change, such as a shift from local or regional markets to global.



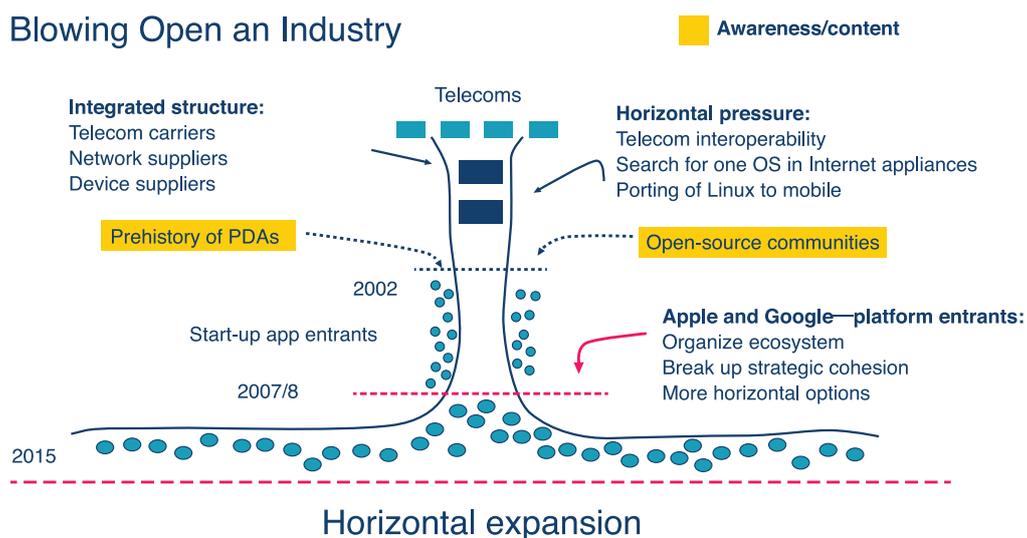
Traditionally, disruption to oligopolies came from newly emerging economies like Japan in the 1970s, South Korea in the 1990s, and China since 2005. The original threat was low-wage inputs and greenfield investments in plant and machinery. However, in each case, these low-wage competitors raised themselves up the value chain and began to compete in manufacturing process innovation, basic science, and design. Gradually, these countries have been integrated into the global supply chain or have created supply chains of their own. The consequence is that new global oligopolies are already forming.

Today, disruption is powered by new human relationships that can be networked globally very quickly. Rather than being based on, for example, emerging market government-support programs or technological invention, they are based on global network technologies, distributed production, decreasing the gap between producer and consumer, and a widely dispersed ideological opposition to oligopoly.

This new pattern of disruption has quite different outcomes from sector disruption in the past due to new forms of organization. The driving force is human, breaking down oligopoly through the steady application of horizontal pressures that reflect people’s need or hunger for opportunity.

Diagram 1 illustrates an example of that vertical to horizontal pattern as seen in telecommunications.

**Diagram 1. Disruption of the Telecommunications Industry**



The left side of the diagram shows the integrated industry structure where big telecoms once worked with big infrastructure and device manufacturers.

The right side (and moving down the diagram) details the period from 1995–2002, with its growing desire for open access to the huge cash-flow opportunities represented by the telecom carriers. During this period, the telecoms had huge investment needs and sustained their cash-flow advantage with the support of investment banks and regulators. That meant using aggressive growth and acquisition strategies, standards setting, and reinvestment in technology. Nonetheless, the community of technologists and entrepreneurs saw opportunities in accelerating interoperability through the World Wide Web, migrating a version of Linux or another form of interoperability to break down the device-maker stranglehold on handsets, and the creation of web-enabled devices that don’t need telecom permission to function on the network. Circumventing telecom standards barriers was a key breach of the oligopoly.

Awareness and experience of new possibilities grew among consumers through the popularity of non-networked personal digital assistant (PDA) devices, like the PalmPilot; this also contributed to the industry's experience of change. (An early platform for apps development, the PDA triggered a 10-year journey of micro-innovation in start-ups that were already building apps for PDAs in the early to mid-2000s.)

As awareness and experience grew in consumers, the open-source community also gained experience and confidence, becoming the flag bearer for global interoperability standards set by the community rather than by committees; this led to Android, which began life as an Internet appliance project for cameras, becoming a successful model for a mobile operating system by 2007.

Apple and Google created the organizing hubs for an existing generation of entrepreneurs, a group that the technology companies magnified from tens of thousands in strength to hundreds of thousands. After 2008 and the introduction of the iPhone and Android devices, we see the disintegration of the telecom device industry. The most notable aspect of this post-2008 period is that Nokia and similar incumbent companies are still making phones and smartphones and attempting their own interoperability push via open source. They have not been made irrelevant by technology but by the new social arrangements around production, distribution, and innovation.

This new cycle of disruption is about a 15-year journey comprised of five stages.

## The Five Stages

**1. Concentration and hubris:** The consolidation of market structure into an oligopoly, with satisfactory margins; regulatory protection; high investment levels in protective forms of innovation; the growth of hubristic management style often with complex high-level decision-making processes and a doctrinal form of innovation ("this is the way we do it!").

**2. The experimental era:** Early horizontal pressure (i.e., broadening market structure) from excluded actors (often employees of existing oligopolists leaving to create their own companies); an attack on the business model through price reduction, which threatens return on innovation investments by the incumbent; increasingly drawing on open-source technologies and work principles, democratizing production access.

**3. The new content layer:** The growth of awareness, through a new content layer, as consumers experience alternatives to oligopoly offers, often as co-creators or participants; changes to information distribution (blogging, social media, social networks, new news and documentary entrants), which can lead to incumbents coming under attack and contribute to a loss of investor support; new relationships in the information layer (new VC firms; informal alliances between financial agencies and the tech press).

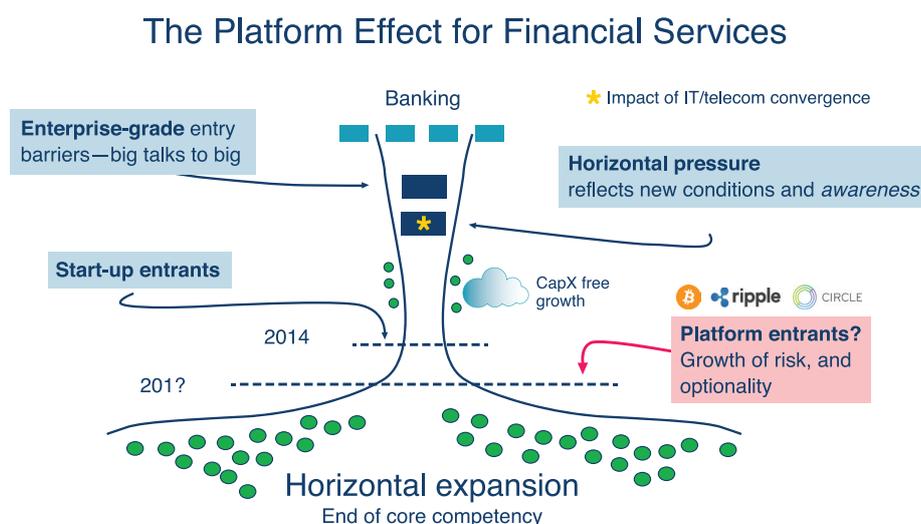
**4. Ecosystem consolidation:** The consolidation of a durable start-up community with continuity of personnel and objectives over time, often represented as an ecosystem that takes on innovation risk; higher levels of process externalization; support for transformational change from funders and business accelerators; promotion of an ideological movement; integration of the entrepreneurial, journalistic, and financial communities, all of which, along with price pressure, undermine the incumbents.

**5. Platform:** The arrival of a platform company as an organizing hub for a new industry structure; adoption of a high-capacity transaction engine; integration of customer needs; increasingly, the switch to a utility business model.

Currently, finance is nearly 10 years into its journey. It is able to maintain a strong measure of integration, offering a wide variety of financial services that are vertically and horizontally integrated. Integration allows incumbents to deal with players of a like scale, companies that are not a threat and are usually working in a supportive capacity. Therefore, banks like to deal with big consultancies and system integrators, the large telecom companies, and large technology vendors. Together they create an ecosystem of incumbent and established relationships incentivized to maintain stability and seek innovations that can be managed with an existing enterprise operating model. Regulation is burdensome but also a barrier to entry.

Diagram 2 illustrates the principle of vertical disintegration in banking, creating broadly based systemic pressures to dismantle oligopolies.

**Diagram 2. Potential Disruption and Platform Integration in Financial Services**



We can see the five-stage disruption process at work in the industry; as yet, the new organizing oligopolists have not emerged.

- 1 **Concentration and hubris:** The development of a tightly integrated oligopoly industry structure built from consolidation of competitive ecosystems over time, such as banks purchasing competitors and specialist service providers, and then amalgamating these; increased complexity of decision making; growing uncertainty over return on innovation.
- 2 **The experimental era:** The long-term growth of competitive but frustrated technological or business model innovators seeking ways to pull down the walls of the oligopoly (for example, some forms of high-frequency trading, low-cost security brokerages demonstrating the potential for price pressure, global payments via PayPal in the early 2000s, Mint, and similar experiments both with customer experience and online banking).
- 3 **The new content layer:** The growth of awareness and experience among consumers of different forms of substitute products and services over a 10- to 15-year period (for example, instant payment via PayPal, online banking, mobile banking, Square, P2P lending, personal financial management services such as Mint); the involvement of consumers in a buy-and-sell side role (in crowdfunding and P2P lending); bank capital requirements slowing down innovation in the core industry and undermining return on innovation; entry of venture capital community; development of new specialized publications (e.g., *The Paypers*); broadening use of social media and social networks as marketing channels.

**4 Ecosystem consolidation:** The growth of a durable start-up ecosystem over about a 10-year period (from PayPal to today's Fintech start-up ecosystem), with continuity of personnel and aims, typically with open source as the arrow tip of disruptive ideas and as a global community for their rapid distribution; new opportunities in global, mobile networks; examples of reverse innovation such as m-pesa; development of business accelerators; growth of an ideological commons (Finovate); increasing use of open source (engagement of banks with open compute).

**5 Platform:** The disintegration of the vertical structure, even before margins are compromised in incumbent companies, into a new generation of horizontal or distributed players, followed by the arrival of organizing platforms that reestablish oligopoly but don't necessarily consolidate the ecosystem into one entity. (This stage is, arguably, imminent in banking.)

However, banking is faced with one complex and apparently contradictory unifying horizontal platform technology in the Bitcoin distributed ledger. Banks wish to replicate Bitcoin, but to do so requires growing ecosystems of trusted entities with third parties interested in keeping (or, in crypto-currency jargon, "mining") records. The immediate future of banking could be affected by external platforms entering the market to organize Fintech start-ups into viable competitive businesses, or banks could be forced into new ledger technologies that have an unknown cost in technology and price deterioration, a move that could also legitimate very low-cost competition.

Financial institutions need to accept that their industry is open to more horizontal pressures and that some of these pressures will lead to more bank-like and fund management-type institutions evolving outside their walls. These will include companies like Alibaba/Alipay and Tencent, which hold user funds in different subscriber-based accounts and are now becoming platforms for the sale of managed funds and payment services to those funds (under Alibaba's Shared Platform Business Group).

This is the first example of true platform competition for financial services, and it remains to be seen how far Alibaba and Tencent will explode the business horizontally through a developer or similar ecosystem and/or through inviting nonestablished funds to operate with them.

As Apple and Google move deeper into payments, they will likely try to emulate some aspects of the Alibaba and Tencent models, such as teaming up with small hedge funds or providing infrastructure for an ecosystem of competitors to financial institutions. Another consideration is that open-source crypto-currencies like Bitcoin will create a completely new type of platform for exchanging value, which in turn will create new bank-like repositories and transmitters of that value.





## The Innovation Index Applied to Financial Institutions: Is the Industry Ready for Change?

Are the financial institutions that we studied ready for the type of platform competition we have outlined? The short answer is that many financial institutions are better prepared than companies in other industries, at least to combat adjacency moves and at least from a technical perspective. They have many strong platform attributes or are moving quickly to establish them.

Bank innovation is, of course, already taking place at various levels. Banks are avid innovators—developing new platform capabilities at the core, improving relationships with the open-source community, beginning to sell product via social media channels, taking a more service-centric view of the customer, acquiring new software companies, and looking at more radical forms of innovation such as harnessing identity management. We also see financial institutions opening labs and other experimental lean innovation initiatives.

In our interviews and research, we found that even those banks that haven't yet developed comprehensive innovation capabilities are conscious of the need to do so. In several cases, they were engaging in feasibility and investment studies or making new hires to begin specific shifts—from waterfall software methodology to agile methodology, and from conventional marketing to social business, for example.

However, we see shortfalls in many enterprise innovation strategies in the following areas:

- The leadership qualities necessary to integrate diverse initiatives and take advantage of change
- Broad availability of technological skills and techniques
- Recognition of the strategic importance of customer identity
- Thought leadership to organize and stimulate teams and tell a transformation story
- Acquisition strategy
- Commitment to marry innovation initiatives with strategy and process change

As the number of innovation techniques grows, the challenge is to create the right strategic context for change. In many sectors, innovation has a tendency to proliferate more projects, more start-ups, more innovation, and less connection with strategy. The Elastic Innovation Index is a tool to help create strategic focus in innovation.

The Index scores innovation capabilities—what we call key capability indicators (KCIs)—across five categories:

- **Content:** How well a company is adapting to the information layer, whether it is broadening consumer or customer knowledge of new offers.
- **Platform:** The degree to which a company is developing technical and service competencies; a company's core technology readiness, especially regarding the Cloud and ecosystems.
- **Leadership:** How adaptive leaders are; whether they are recognizing and responding to market changes, seeking new revenue streams, or preparing to execute radical adjacencies.
- **Strategy:** How a company is addressing capabilities to enact structural change rather than just tactical innovation; the readiness to create a holistic strategy and a direct connection with customers; acquisition strategy; an ability to transition to process innovation and velocity as competitive strategies.
- **Externalization:** Whether a company is offloading capabilities and risk to other companies or ecosystems in order to become more fluid in how it handles its processes.

To arrive at these scores, we asked questions that examined a commitment to some kind of structural change. For example:

- Are you creating services outside of your traditional product portfolio in response to horizontal pressures in the industry?
- Do you have open APIs or an ecosystem-like community to spread innovation risk?
- Do you make use of the latest IT/business innovation techniques?
- Are any executives considered thought leaders?

The study results suggest that the most capable companies have very mixed attributes—start-ups with global reach, start-ups bound by national borders, private companies with deep-rooted experience, public companies with deep resources—but all with a broad range of highly relevant capabilities. The report also suggests, however, that these capability levels drop quickly once outside the top 10 (and even within the top 10).

## THE TOP FINANCIAL INSTITUTIONS

Which are the top 25 financial institutions by these metrics? To arrive at that answer, we began with 150 banks and narrowed that down to 60 to study in depth, interviewing 20 of those to help validate the overall research. We focused on banks with an innovation reputation, including wholesale banks and also, in consultation with SWIFT, retail banks and organizations providing bank-like services such as fund managers. We also gave banks considerable benefit of the doubt on their platform arrangements. In general, banks have strong platforms, but these don't always meet the definition of a true business platform, one that is open to third-party contributors. However, we felt the study benefitted from scoring them high for platform capability.



It is very important to remember that these are scores of innovation capability, or what we are calling KCIs. The scores do not represent a league table of innovation prowess or success. They indicate what a company is capable of. It may be that management exploits capability well or squanders it—we are not measuring that.

The top 10 comprises four companies that are privately owned, although the study as a whole only contained seven privately owned companies or just over 10% of the total number of analyzed companies. The privately owned company is almost four times over-represented in the top 10.

The top 10 also consists of three new entrants to the financial industry or 30% of the top 10 companies. In the study as a whole, start-ups account for 6.6% of companies, making them over-represented by more than fivefold in the top 10.

Within the overall study, wealth and investment management specialists are under-represented in the top 10 and top 25. Although one fund manager is a top 10 company, the other fund managers we analyzed came in at 49, 54, 57, and 59 (i.e., among the lowest scored). Although partly the result of a present inability to be comprehensive in analyzing fund managers, this result still points to a glaring disparity between the most capable (position 7) and the least capable.

What do these statistics from the top 10 and top 25 tell us about the industry? They do seem to indicate some potential changes to industry structure, and some of the most obvious conclusions to be drawn from this are supported by Professor Steven Klepper's work in market structure analysis, oligopoly, and new firm entry.

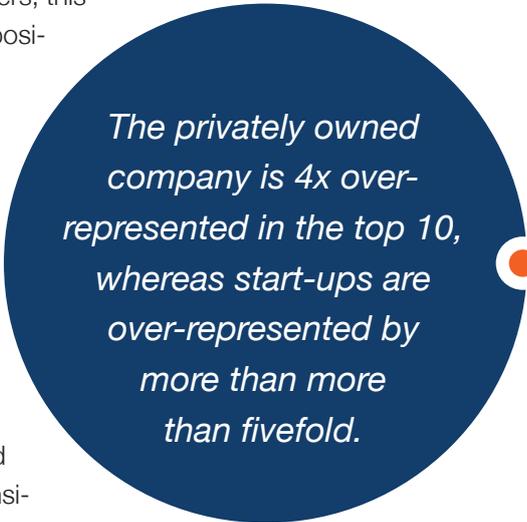
On oligopoly and firm survival, Klepper found that complex decision processes at the senior level of firms are typically associated with the inability to respond to competitive pressure (and is responsible for the decline of whole industrial sectors such as the US tire industry in the 1930s). Private ownership allows for longer-term investment decisions.

Klepper's work suggests that the decline of large companies isn't a result of disruption by a new technology and cheap, good-enough products (Christensen's Innovator's Dilemma theory is applicable to only a small range of cases) or a result of their size or market dominance.

What generally counts in favor of resilience is being an early entrant to a market (and this might include being an early entrant to initiatives like block-chain technology and crypto-currencies, as well as new types of wealth management seen at Alipay) and pushing the rate of innovation in order to maintain an acceptable margin between cost and price. Once the rate of innovation goes down, the barriers to entry drop and so do returns to investors, making it less and less likely that an organization will find support for change.

The significant executive skill is to remain in control of the cost and pace of R & D and innovation and, if necessary, to raise the cost of participation in an industry. The effect of that strategy is to create oligopoly power. It is very often the successful oligopolist that survives over time. Clearly, oligopoly power is still a worthwhile objective and many banks have it.

The influence of oligopoly power is evident in many industries, including banking. In a sense, banks' main challenge is not in being competitive but in retaining oligopoly positions in a wider range of services in their deposit-taking markets. However, Klepper's work did not take account of the possibility that whole industry

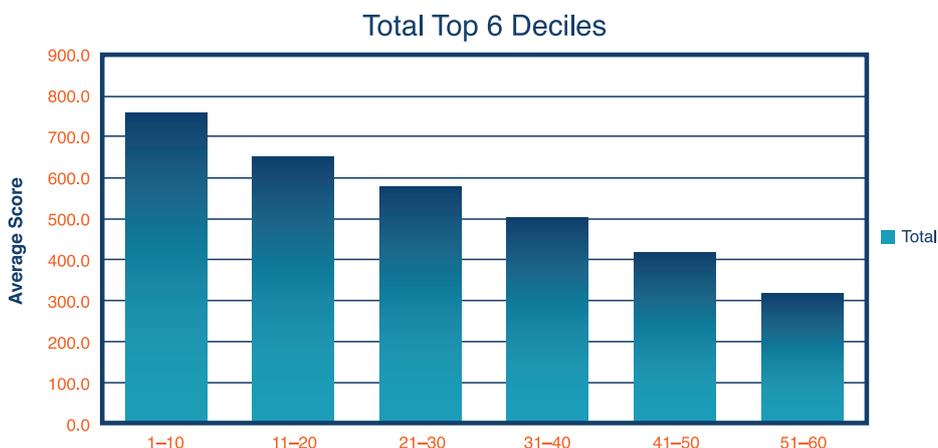


*The privately owned company is 4x over-represented in the top 10, whereas start-ups are over-represented by more than more than fivefold.*

structures can be transformed in ways that destroy oligopoly power very quickly. We are also now witnessing new challenges to industry structure that are not driven by this dynamic, challenges that many companies are not well positioned to meet.

The top 60 companies that we looked at progressively, but quite rapidly, decline in capability as illustrated in Chart 1.

**Chart 1. The Distribution of Innovation Capability across 60 Financial Institutions**



The decline in capability is relatively swift given that these are all banks with some form of innovation reputation. The KCI scores of the decile 41–50 are only 55% of the decile 1–10. However, it is worth pointing out that at least the top 10 financial institutions do not markedly lag in innovative sectors like technology. This is illustrated in the following chart comparing the top 10 across all companies analyzed in all of our studies (from a starting pool of 5,000 companies), the top 10 tech companies, and the top 10 financial companies.

**Chart 2. The Top 10 Companies by KCI: All Companies, Tech Companies, and Finance Companies**

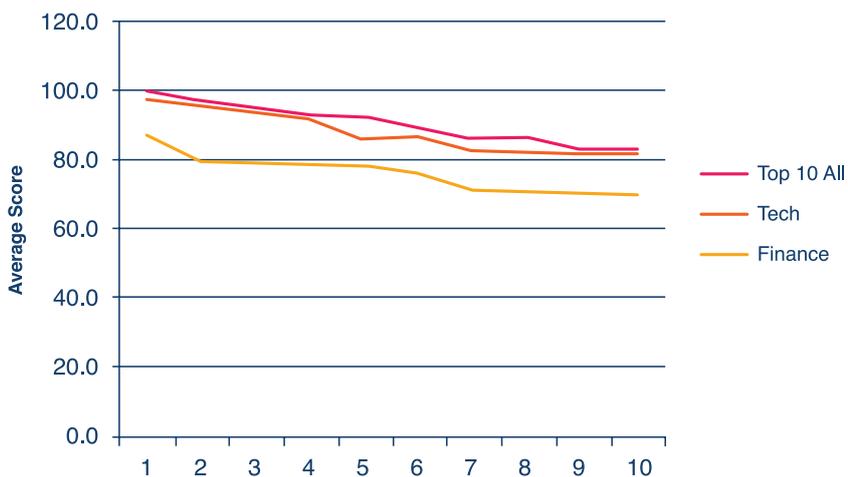
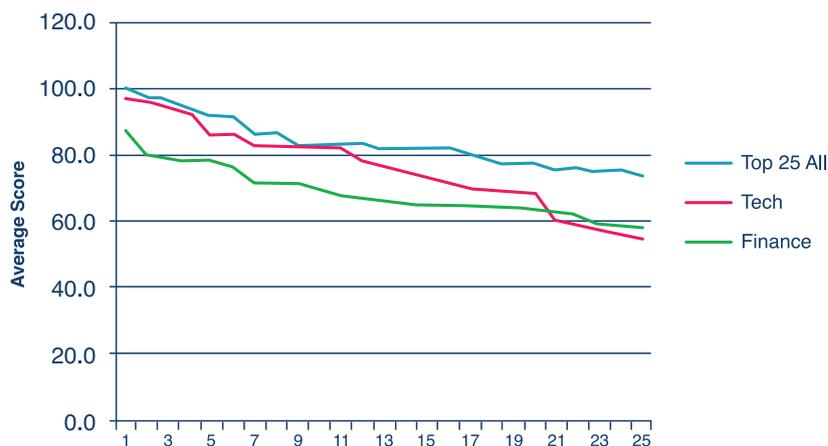


Chart 2 shows that the financial sector lags in technology and “All” categories by 12%–15% throughout the top 10. However, something different happens when we plot the top 25.



Chart 3. The Top 25 Companies by KCI: All Companies, Tech Companies, and Finance Companies



In Chart 3, it becomes clear that the finance sector may have more strength in depth than the technology sector, at least in terms of overall innovation capability. Some element of that difference can be explained by time—the studies took place a year apart, and in that year companies learned more about new operating requirements; some difference might also be explained by slight alterations in the questions asked. But by and large, the three categories are comparable, and finance comes out better than expected. Finance continues its decline beyond place 25, falling a further 30% by place 50.

## THE STRENGTHS OF THE TOP 10

What sets the top 10 apart from peer companies? To assess where the top 10 really stand out, we set a criterion to identify characteristics where the top 10 scored at least twice the average and four times the decile 41–50. We discovered five qualities, listed below, that met the criterion. The top 10 scored twice the average score on these qualities and scored four times as much as the companies ranked 41–50.

These five capabilities are generally those a new entrant would routinely adopt in any Internet-defined market. These capabilities are also characteristic of an elastic enterprise, one that is capable of taking a platform and ecosystem approach to strategy. In principle, the top 10 companies are capable of doing this. They have *new entrant* characteristics.

### ● The Five Qualities of Excellence of the Top 10 Companies

- Thinking as a platform business
- Having or planning open APIs
- Having executives with founder experience
- Engaging in open-source initiatives
- Making use of externalized skills and labor sources

The idea of a “new entrant” in the finance sector needs some qualification, as finance is a disparate sector with various types of activity. It is worth asking, for example: Is P2P lending the same industry sector as bank

lending? Banks can participate in P2P lending by channeling funds into a P2P platform, but by definition they can't control it. The same applies to crypto-currencies; banks can be participants, but they cannot exercise central control. In fact, a recent Bank of England report on crypto-currencies pointed out that crypto-currencies could lead to an inability of money supply to vary in response to demand and would likely cause welfare-destroying volatility in prices and real activity. Crypto-currencies could be a fundamental threat to economic stability because of the lack of central control or they could liberate economic activity that is constrained by the current banking system. Either way, the bank is not participating as a control stratum in a hierarchically organized system.

This points to a more fundamental change in finance than banks currently realize. The Bank of England referred to the changing system as the Internet of Finance, a term that better captures the scope of change. A distributed financial system is a different market from the centrally controlled one. Block-chain technology is not a better way of executing payments; it is a different set of organizational arrangements with entirely different participation motives, trust factors, and rewards. Highly experimental and inventive, it represents a different institutional culture, perhaps even an anti-institutional culture. And as the Bank of England pointed out, it is potentially destructive to existing hierarchically controlled money systems.

As Klepper also pointed out, new entrants typically achieve long-term durability and oligopoly power. The incumbents in financial instruments are actually new entrants to new industries like digital currency and block chains. It is also worth noting that the top 10 companies in the Index come from a variety of backgrounds, being publicly and privately owned, start-up and established, global and national. In parallel, the activities of actors like Alibaba suggest that horizontal pressures are already well advanced—Alibaba is an online retailer that has now become a bank and wealth management company. Typically these types of platform companies see no vertical barriers separating industries. A transaction is a transaction.

Going beyond these five entrant capabilities, we also scored the top 10 on a second scale of excellence, this time to identify characteristics where they scored at least twice the average of the decile 51–60.

## ● Second-Order Qualities of Excellence

- Using the Cloud
- Developing federated services
- Retaining founders on the executive team or board
- Having a crypto-currency strategy
- Making use of lean innovation or labs
- Basing decisions on constant feedback loops
- Acquiring software companies
- Having some form of public-facing ideation process



These second-order KCIs also show banks with a marked willingness to work outside the walls of the organization through partnerships, a tight integration of automated customer feedback, and the acquisition of software companies to accelerate change.

Making use of the Cloud for new services; developing federated services to speed a product to market; having founders around to push the pace of change; using lean innovation or labs to accelerate change or deepen experimental capability and experience; and, strategically, getting an early entry point to crypto-currencies—these characteristics show a combination of strategic and tactical acumen. Whatever route a financial institution chooses to change its processes, these types of capabilities will always help.

## SPECIFIC CATEGORY CAPABILITIES

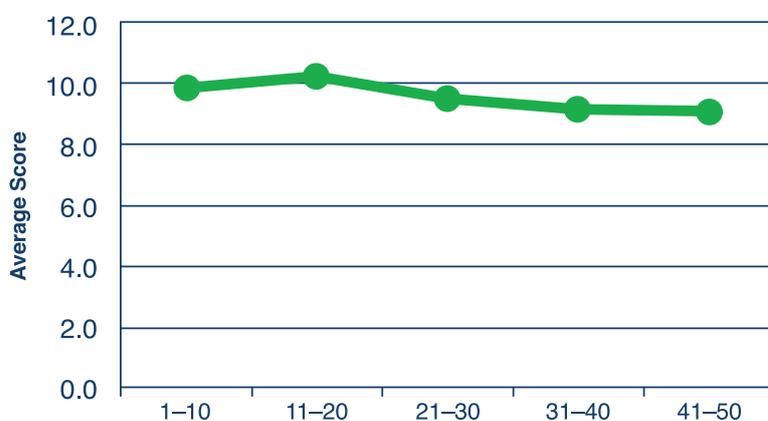
We scored companies in five categories of innovation: content, platform, leadership, strategy, and externalization. It is worth noting the industry trends in each of these category capabilities.

### Content

Content represents the information economy around a product or service. Clearly, access to content gives consumers or customers an opportunity to make new choices. And although banks tend to talk of the content layer as omni-channel marketing, in truth, content can be an advantage, or it can contribute to the destruction of an industry structure. Apple retains leadership through a strong content ecosystem, and Google destroyed the newspaper industry by reconfiguring content. Start-ups like crowdfunder Kickstarter can attract online affinity as powerfully as a big brand spender like Coca-Cola. Right now, existing financial institutions are using the content layer in a roughly equal way, with little decline in capability across the top 60. However, top players use the same information layer—the web—to transact. In that sense, they are not using the content layer simply for omni-channel. They are players in the Internet of Finance. They are what we call born-social, with relationships as an integral part of their value proposition.

This KCI measures how well companies are adapting to social information. Across the top 50 institutions, the decline is very small. The chart's most notable data point is the rise in the use of social communications in the decile 11–20. This indicates that the top 10 companies are less focused on social information.

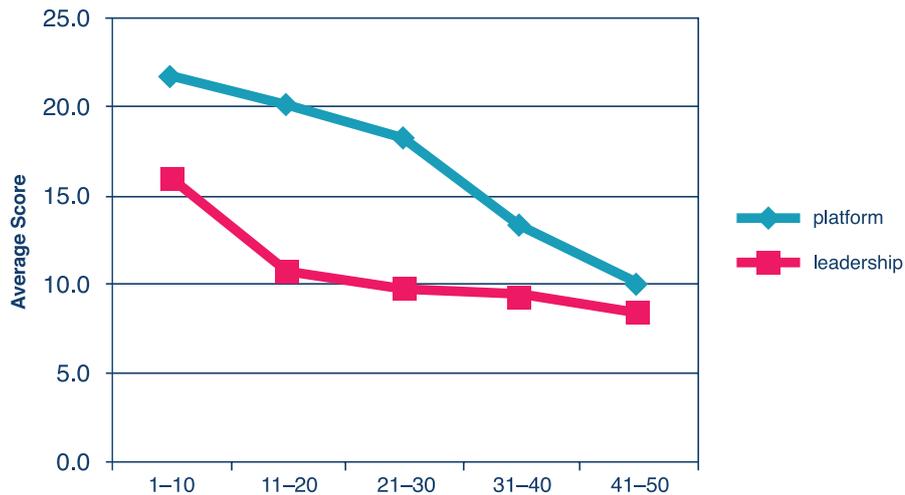
**Chart 4. Content KCIs across the Top 50 Institutions**



## Platform

Banks are natural platform companies in the sense that most of their transactions are organized on sophisticated software platforms. (True business platforms perform much deeper services than simple transactions. One example of a true platform is Google, which organizes search, SEO experts, searchers, content advertisers, and so on, through one business platform and one transaction engine. Alipay is beginning to look like such a platform now that it organizes transactions for Alibaba, as well as providing wealth management services and loans from one transaction engine.)

Chart 5. Platform versus Leadership KCIs across the Top 50 Institutions



However, Chart 5 shows that both platform and leadership capabilities decline quickly. There is a drop of about 20% in the top 20 companies in platform capability but then a drop of 50% between positions 20 and 50. Leadership capabilities show a more immediate and dramatic drop, suggesting that even though the top 30 have strong platform capabilities, they may not have the leadership skills to execute a platform strategy. It is also worth noting that platform skills are higher than leadership skills across the top 50 institutions.

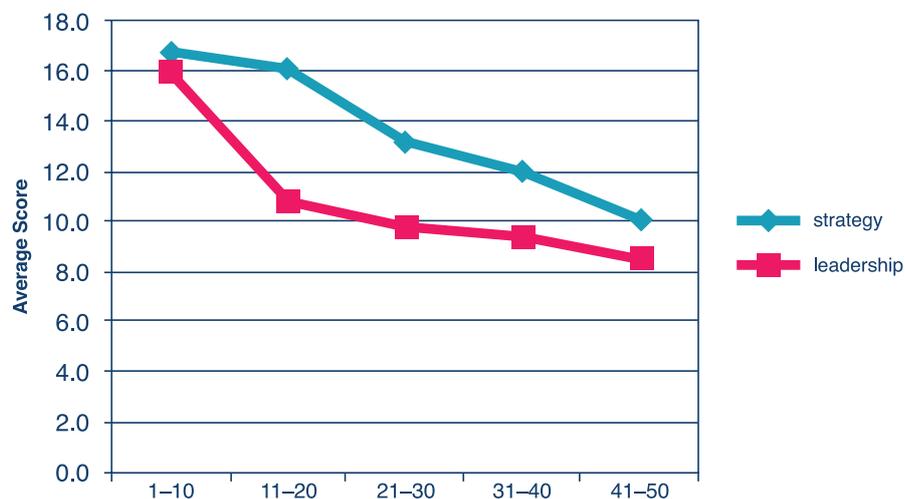
Part of the problem is that under the platform category, financial institutions talk about their platforms often without integrating the platform with Cloud-based services. In the area of leadership, financial institutions lack the dynamic of founder experience and decision making. They are also slow to develop thought leadership and to quickly adopt new practices, particularly in integrating software development and business objectives. Taken together with the lag in Cloud adoption, it looks as though financial institutions would benefit from a much stronger IT/business dialogue.

*Financial institutions would likely benefit from a much stronger IT/business dialogue.*

## Leadership

The leadership weaknesses we noted in platform capabilities seem to translate into strategic deficiencies, too. Although leadership capabilities hold up longer than strategies, the gain does not last for long.

**Chart 6. Leadership versus Strategy KCIs across the Top 50 Institutions**



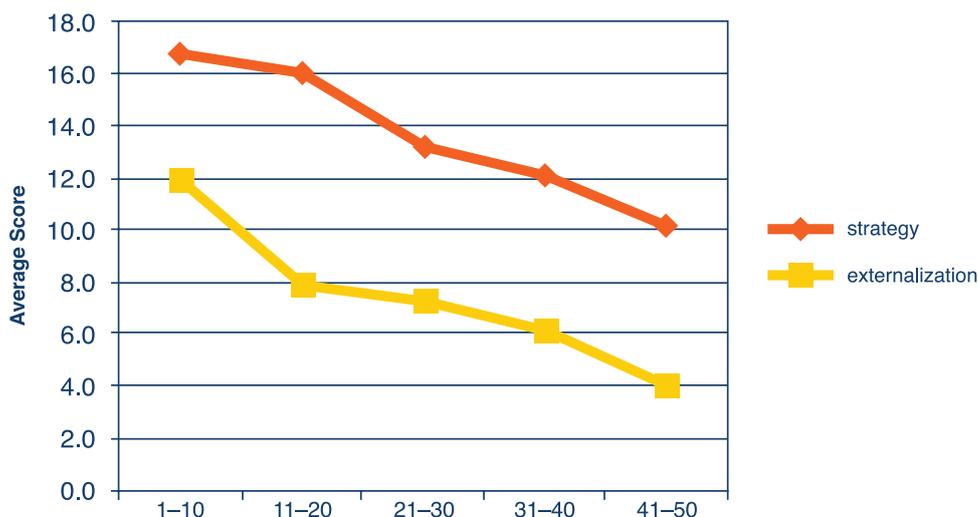
In the area of leadership, we found that diversity is very underdeveloped, with the sector scoring poorly, even on a simple metric like having more than one female member on the executive team. We also found weaknesses in the use of advanced social media platforms to help stimulate more internal dialogue. And as already mentioned, leaders in financial institutions are slow to develop thought leadership, and this may handicap the development of a strong strategy that investors can buy into.

In the area of strategy, we found that financial institutions were weak in design thinking and were extremely reluctant to advance products outside of their core businesses, even when those core businesses were already horizontally spread. They claimed to be working with strong customer feedback loops, but we found it difficult to understand how this can be true outside of practices like credit scoring. Additionally, institutions are ambivalent about acquiring new software companies to speed up the change process and have yet to develop new integrated services.

## Strategy and Externalization

These two capability sets are closely linked: if companies externalize key processes, then an executive team has more bandwidth for developing new business concepts and options. Likewise, the disruptive trend is to make use of highly decentralized production systems where customers and small producers (such as apps developers) are closer (in niche understanding, for example). There are other gains in externalization, such as being able to draw on the wisdom of crowds, particularly specialist groups, and the use of open-source software both as an asset and a working method. Understood like this, externalization is not outsourcing.

Chart 7. Strategy and Externalization KCIs across the Top 50 Institutions



Externalization of this nature declines sharply in the financial sector (though it is well known for outsourcing). Particularly in the investment management area, we found a growing interest in co-sourcing, or working on a very proactive basis with partners who do not draw IP out of the company in the way outsourcers do. But externalization as such is not widely practiced, beginning with a small share of companies and tailing off to negligible proportions. Strategy follows a similar downward trajectory.

## CONCLUSIONS

The highest-scoring companies lead across all categories other than content, suggesting they are satisfied to make their way without over-publicizing what they do. They are particularly strong on platforms and have the leadership and strategic qualities to support change. Here are some further takeaways for the industry:

- 1 The threat factor is already high up the chain.** The top 10 are made up of a diverse group of entities—national, international, global, start-up, public, private, and entrenched—which suggests external competition is already encroaching on finance and that complex decision processes in the incumbent publicly owned companies could be a barrier to responding successfully.
- 2 The future lies in the Internet of Finance and globalism.** The Internet is global and the future belongs to companies that can create globally efficient platforms that serve customers well, involve third parties through partnership or ecosystems, and involve customers, too, as users and co-creators of services (such as in P2P systems). Financial institutions need to respond quickly to more diverse customer needs, probably outside their existing areas of geographical expertise.
- 3 Winner takes all.** Nothing suggests banks will disappear, but the pattern of disruption in other sectors is for clear winners to emerge that have huge concentrations of power, influence, and cash—and for these winners not to be the incumbents.



- 4 **High technological capability exists in the industry.** Financial institutions are technologically well placed to develop platform strategies but lack the IT/business dialogue to cross the chasm. This deficit can easily be remedied by developing IT/business forums.
- 5 **There's an urgent need for education and dialogue.** Financial institutions in general seem to lack diverse management and lack management with founder experience. They are not buying into the established software innovation industry—instead, they are backing the Fintech start-up community, which could delay the acceleration of change they need. These are strategic errors that probably result from the lack of thought leadership in the sector. While the deficits we've noted can easily be remedied with education and dialogue, the need to act is urgent. Disruption happens very quickly once it reaches a tipping point.
- 6 **The industry needs a better understanding of disruption.** Looked at as a whole, finance is primed for the same kinds of disruption that have affected other sectors. However, the source of disruption is often misunderstood. The assumption is that “digitalization” is the threat; yet, financial institutions are, by and large, already digitized. They may lack interoperability across functions and services, but that is a separate issue. Start-ups are able to cherry-pick different, attractive revenue streams, because they can easily rent global, seamless networks to manage transaction alternatives. This opportunity will rapidly undermine support for the banks' existing innovation investments and inevitably will reverberate in the boardroom. But the disruption point is a cumulative process. We described it as requiring five stages, and banks seem to be in the fourth stage, awaiting platform providers to organize disruption without taking on the handicap of regulation. To survive and flourish through and beyond the last stages of this process, banks need a better understanding of how to respond to structural change.
- 7 **Banks can be leaders in a new industry.** In the meantime, we believe many banks are in a position to take on a leading role if they devise an aggressive and appropriate acquisition strategy and learn how to take advantage of their platforms. The timescales for banks to really feel the pressure on core profitability is about two years. What leaders need to understand, though, is that they need to compete in new sectors—globally distributed financial services with the capacity to manage highly scaled business relationships and deliver value back to the customer quickly. Banks need to grasp that this picture is one of huge potential and stop simply performing to their benchmarks.

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