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DATA MANAGEMENT

The big gap between strategic intent
and actual, realized strategy

HOWARD YU | JIALU SHAN

DATA ANALYTICS

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DEAR READER,

Welcome to the milestone 50th edition of the Capco Institute Journal of Financial Transformation.

Launched in 2001, the Journal has covered topics which have charted the evolution of the financial services sector and recorded the fundamental transformation of the industry. Its pages have been filled with invaluable insights covering everything from risk, wealth, and pricing, to digitization, design thinking, automation, and much more.

The Journal has also been privileged to include contributions from some of the world's foremost thinkers from academia and the industry, including 20 Nobel Laureates, and over 200 senior financial executives and regulators, and has been co-published with some of the most prestigious business schools from around the world.

I am proud to celebrate reaching 50 editions of the Journal, and today, the underlying principle of the Journal remains unchanged: to deliver thinking to advance the field of applied finance, looking forward to how we can meet the important challenges of the future.

Data is playing a crucial role in informing decision-making to drive financial institutions forward, and organizations are unlocking hidden value through harvesting, analyzing and managing their data. The papers in this edition demonstrate a growing emphasis on this field, examining such topics as machine learning and AI, regulatory compliance, program implementation, and strategy.

As ever, you can expect the highest caliber of research and practical guidance from our distinguished contributors, and I trust that this will prove useful to your own thinking and decision making. I look forward to sharing future editions of the Journal with you.

A handwritten signature in black ink, appearing to read 'Lance Levy', with a stylized, flowing script.

Lance Levy, **Capco CEO**

FOREWORD

Since the launch of the Journal of Financial Transformation nearly 20 years ago, we have witnessed a global financial crisis, the re-emergence of regulation as a dominant engine of change, a monumental increase in computer processing power, the emergence of the cloud and other disruptive technologies, and a significant shift in consumer habits and expectations.

Throughout, there has been one constant: the immense volume of data that financial services institutions accumulate through their interactions with their clients and risk management activities. Today, the scale, processing power and opportunities to gather, analyze and deploy that data has grown beyond all recognition.

That is why we are dedicating the 50th issue of the Journal of Financial Transformation to the topic of data, which has the power to change the financial industry just as profoundly over the coming 20 years and 50 issues. The articles gathered in this issue cover a broad spectrum of data-related topics, ranging from the opportunities presented by data analytics to enhance business performance to the challenges inherent in wrestling with legacy information architectures. In many cases, achieving the former is held back by shortcomings around the quality of, and access to, data arising from the latter.

It is these twin pillars of opportunity and challenge that inform the current inflection point at which the financial industry now stands. Whilst there is opportunity to improve user experiences through better customer segmentation or artificial intelligence, for example, there are also fundamental challenges around how organizations achieve this – and if they can, whether they should.

The expanding field of data ethics will consume a great deal of senior executive time as organizations find their feet as they slowly progress forward into this new territory. In my view, it is critical that organizations use this time wisely, and do not just focus on short-term opportunities but rather ground themselves in the practical challenges they face. Financial institutions must invest in the core building blocks of data architecture and management, so that as they innovate, they are not held back, but set up for long-term success.

I hope that you enjoy reading this edition of the Journal and that it helps you in your endeavours to tackle the challenges of today's data environment.

Guest Editor
Chris Probert, **Partner, Capco**

THE BIG GAP BETWEEN STRATEGIC INTENT AND ACTUAL, REALIZED STRATEGY

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ABSTRACT

Most executives know what needs to get done, but there is always a gap between intention and the realized strategy of the firm. We investigated three different industries (automotive, banking, and consumer goods sectors) and showed how some companies can close this knowing-and-doing gap and beat the competition. We relied on hard market data and ranked companies based on the likelihood that they acquire new knowledge in their efforts to prepare for the future. Such findings can be generalized for other sectors, consequently providing a set of important lessons for managers at large.

1. INTRODUCTION

It is common knowledge among executives that while humans now live longer,² companies die faster. The average lifespan of companies listed in Standard & Poor's 500 was 61 years in 1958. Today, it is less than 18 years, according to a study by McKinsey.³ Every CEO or senior executive is presumed to understand that. Companies are being bought out, merged, or forced to go bankrupt. It is, therefore, no surprise that in 2019, the imperative for virtually all sectors is to leverage connectivity and artificial intelligence (AI) in order to realize some form of competitive advantage. No carmaker, for instance, would speak to investors without mentioning "future mobility". BMW is a "supplier of individual premium mobility with innovative mobility services." General Motors aims to "deliver on its vision of an all-electric, emissions-free future." Toyota possesses the "passion to lead the way to the future of mobility and an enhanced, integrated lifestyle." And Daimler, the maker of Mercedes, sees the future as "connected, autonomous, and smart."

However, a peculiar form of the knowing-doing gap still persists, and it is not unique to automakers. A number of financial institutes we spoke to, for instance, have all established corporate venture funds to invest in innovative startups. They practice open innovation, posting challenges online, and running tournaments with external inventors. They have organized "design thinking" workshops for employees to rethink customer solutions. And yet, their core business continues to be encroached on by Google and Amazon every day, if not by Tencent or Alibaba or some other digital upstart. It seems that no matter how hard these in-house innovation experts try, the big companies will simply not budge. "Tell me one thing that I should do but haven't tried," hissed a frustrated executive the moment I mentioned Google Venture.⁴ The ship is not just big; the ship cannot turn.

¹ Howard Yu is the author of LEAP: How to Thrive in a World Where Everything Can Be Copied (<http://www.howardyu.org/>; PublicAffairs; June 2018), LEGO Professor of Management and Innovation at the IMD Business School in Switzerland, and Director of IMD's signature Advanced Management Program (<https://bit.ly/2npnnJ1>). A native of Hong Kong, he earned his doctoral degree from Harvard Business School. Jialu Shan is a Research Fellow at The Global Center for Digital Business Transformation – An IMD and Cisco Initiative.

² Rini, R., 2019, "The last mortals." The Times Literary Supplement, May 14, <https://bit.ly/2pls0JA>

³ Garelli, S., 2016, "Why you will probably live longer than most big companies," IMD Research & Knowledge, December, <https://bit.ly/2Z0rSXH>

⁴ Knapp, J., J. Zeratsky, and B. Kowitz, 2016, Sprint: how to solve big problems and test new ideas in just five days, Simon & Schuster

2. SUCCESSFUL COMPANIES DON'T JUST TALK, THEY PREPARE

Andrew S. Grove, the long-time chief executive and chairman of Intel Corporation, told a Stanford researcher in 1991, "Don't ask managers, 'What is your strategy?'. Look at what they do! Because people will pretend." What Grove saw as the realized strategy of a firm was the cumulative effect of day-to-day prioritizations or decisions made by middle managers (engineers, salespeople, and financial staff) – decisions made regardless of what the company said its intended strategy was.

And so, at IMD Business School, we track how likely a firm is to successfully move toward a new knowledge discipline in its effort to prepare for the future. For automakers, as mentioned earlier, it is the shift in know-how from mechanical engineering done by combustion-engine experts to electrical engineering and programming for self-driving cars, done by the same kind of experts who build computers, mobile games, and handheld devices. For consumer banking, it is the shift from operating traditional retail branches with knowledgeable staff members who provide investment advice to running data analytics and interacting with consumers the same way an e-commerce retailer would.

A ranking can thus measure incumbents in each sector on the degrees of progress they make toward what they have announced about their strategic intent in annual reports or letters to shareholders. One can rely on hard market data – data that is publicly available with objective rules – rather than using soft data such as polls or the subjective judgments of raters. Polls suffer from the tyranny of hype. Names that get early recognition get greater visibility in the press, which accentuates their popularity, leading to a positive cascade in their favor. Rankings based on polls also overlook fundamental drivers that fuel innovation, such as the health of a company's current business, the diversity of its workforce, its governance structure, the investments it has made against competitors, the speed of its product launches, and so on. What is needed is a kind of composite index that captures the totality of that multifaceted innovation.

What follows is an analysis using hard market data from three industries: automotive, banking, and consumer goods sectors. We measure how prepared for a changing future companies in these sectors are. The pace of change may differ across these

sectors, but the directional shift among them is undeniable. Our analysis, therefore, offers a set of important lessons that executives from other sectors can apply in their own attempts to close the gap between strategic intent and the realized strategies of their firms.

Table 1: Ranking of top 20 automakers and component suppliers based on "leap readiness index"

COMPANY NAMES	SCORE	RANK
TESLA INC.	100.00	1
VOLKSWAGEN AG	95.33	2
GENERAL MOTORS CO.	90.77	3
TOYOTA MOTOR CO.	88.36	4
FORD MOTOR CO.	80.92	5
DAIMLER AG	71.96	6
NISSAN MOTOR CO.	65.47	7
BMW AG	65.19	8
APTIV PLC	63.38	9
GEELY AUTOMOBILE HOLDINGS	60.89	10
PEUGEOT S.A.	60.87	11
FERRARI NV	58.78	12
FIAT CHRYSLER AUTOMOBILES N.V.	57.63	13
HONDA MOTOR	57.40	14
HYUNDAI MOTOR CO.	57.17	15
BAIC MOTOR CORP.	56.58	16
CONTINENTAL AG	56.31	17
AB VOLVO	56.02	18
BYD CO.	55.36	19
FUYAO GLASS GROUP	51.38	20

3. RIDE TO MISADVENTURE AT BMW

Mobility, in the past, was created by the individual cars that manufacturers sold. In contrast to the personally owned, gasoline-powered, human-driven vehicles that dominated the last century, all carmakers today understand that in the future, mobility will be produced by service companies operating a variety of self-driving vehicles in fleets, with some form of ride-sharing scheme. It is a vision too frequently touted in annual reports,⁵ letters to shareholders,⁶ consultancy studies,⁷ and trade magazines.⁸ When this vision will be fully realized is

⁵ <https://bit.ly/2nMqMIC>

⁶ <https://bit.ly/2nMrQG7>

⁷ <https://mck.co/2oBz93g>

⁸ <https://bit.ly/2nxM3Pw>

anyone's guess, but what is certain is that automakers must start their transition toward mobility services, which is based on self-driving electric vehicles that will be paid for by the trip, by the mile, through a monthly subscription, or a combination of all three. Using an objective composite index, Table 1 ranks the top 20⁹ automakers and component suppliers according to their degree of preparedness for such a future. The detailed methodology is described in the Appendix.

This index quickly highlights the general conservatism of large companies and also reveals how opportunities and market leadership are squandered. Most radical ideas fail; large companies do not tolerate failure. Too often, companies conveniently consider innovation solely in terms of the nuts and bolts of everyday implementation: gathering consumer insights, tweaking financial forecasts, iterating product designs in experiments, and prototyping offerings. What executives usually forget is that scaling up disruptions not only takes courage and determination, but also resources so vast and talents so deep that they may exceed the company's current capital and governance structure. Unless an alternative resource allocation is achieved, the new strategy will never be fully realized. Merely tinkering with innovation on the fringes cannot overcome a constrained capital agenda. Anyone can witness the gravity of this problem firsthand at the BMW Museum.

Walking up the spiral ramp of one of the rotundas inside the BMW Museum, one sees flashes of pictures from BMW history displayed in variable sequences, slipping in and out of view like mirages. At the very top of the museum is a "themed area"¹⁰ of about 30 stations demonstrating an emissions-free, autonomously driven future. These are not only a vision but also a real project, begun in earnest in the autumn of 2007 by then-CEO Norbert Reithofer and his chief strategist Friedrich Eichiner. The two men tasked engineer Ulrich Kranz, who had revived the Mini brand in 2001,¹¹ to "rethink mobility." The task force soon grew to 30 members and moved into a garage-like factory hall inside BMW's main complex.

"I had the freedom to assemble a team the way I wanted. The project was not tied to one of the company's brands, so it could tackle any problem," Kranz said in an interview with

Automotive News Europe in 2013.¹² "The job was to position BMW for the future – and that was in all fields: from materials to production, from technologies to new vehicle architectures."

And so Kranz and his team went on to explore uncharted territory that included "the development of sustainable mobility concepts, new sales channels, and marketing concepts, along with acquiring new customers." The starting point for "Project i" was, in other words, a blank sheet of paper.

"We traveled to a total of 20 mega-cities, including Los Angeles, Mexico City, London, Tokyo, and Shanghai. We met people who lived in metropolises and who indicated that they had a sustainable lifestyle. We lived with them, traveled with them to work, and asked questions," Kranz recalled. "We wanted to know the products that they would like from a car manufacturer, how their commute to work could be improved, and how they imagined their mobility in the future. As a second step, we asked the mayors and city planners in each metropolis about their infrastructure problems, the regulations for internal combustion engines, and the advantages of electric vehicles."

Once all the findings were gathered, Kranz expanded his team by seeking out "the right employees both internally and externally." The result was BMW's gas-electric i8 sports coupe and all-electric i3 people mover, which shimmered under white lights at BMW World, where the company's top automotive offerings are showcased. The i3 had almost no hood, and the front grille was framed by plastic slits that looked like a pair of Ray-Bans. It came in a fun-looking burnt orange.¹³ The front seats were vertically poised, with the dashboard stretching out, such that they exuded a "loft on wheels" vibe. Like the interior, made of recycled carbon fiber and faux-wood paneling, the electric motor of the i3 was geared toward urban dwellers in mega-cities who yearned for a calm, relaxing drive.

What made BMW all the more remarkable was its timing. Almost two years before Tesla's Model S was introduced, BMW had presented its own battery-powered car as a revolutionary product and committed to building it and delivering it to showrooms by 2013. By the time the BMW i3 went on sale, Tesla's Model S had spent just over a year on the U.S. market. The 2014 i3 went on to win a World Green Car award,¹⁴ as did the 2015 model, the i8. In short, BMW was fast and early.

⁹ The rankings for the top 55 is available from the authors.

¹⁰ <https://bit.ly/2qot44>

¹¹ Ewing, J., 2010, "Latest electric car will be a BMW, from the battery up," New York Times, July 1, <https://nyti.ms/2ozSaTS>

¹² <https://bit.ly/2mY3yZ4>

¹³ <https://yhoo.it/2ozUwCc>

¹⁴ <https://bit.ly/2nZRnLM>

Then something terrible happened – or more specifically, nothing really happened.

The i3 soon turned five years old and the i8 four. The BMW i brand had included the services DriveNow and ReachNow (for car sharing), ParkNow (to find available parking), and ChargeNow (to find charging stations). However, besides being featured in occasional press releases, Project i has since given way to other BMW sports cars in prime-time TV advertising spots. There has not been any news from Project i, except that project members are reportedly leaving.¹⁵ Ulrich Kranz, the former manager, got together with former BMW CFO Stefan Krause at Faraday Future, and after a short stay, they started Evelocity in California, where they recruited another i-model designer, Karl-Thomas Neuman. Kranz is not alone. Carsten Breitfeld, the former i8 development manager, is now CEO of Byton, where he also enlisted a marketing expert and a designer from the BMW team. Key people kept leaving when they did not see their work get into the market.

How much Project i has cost BMW can only be estimated. If, according to BMW figures, the carbon-fiber production and the autobody work for the i3 set the company back some half a billion euros,¹⁶ the entire project could easily have cost two to three billion – a sum that would have covered the development of two to three series of a conventional VW Golf or Mercedes S-Class. With this much bleeding, then newly appointed CEO Harald Krüger talked of Project i 2.0,¹⁷ a plan to integrate the BMW i sub-brand back into the parent company and refocus distribution efforts on “classic” products. One can speculate the creation of the new organizational structure would only exacerbate the tendency for executives from the mainstream business to resist electric vehicles, because those vehicles, due to their low volumes, remain unprofitable products to sell. Furthermore, if these mainstream business executives do not make their numbers, they will not get their bonuses. In short, the structure of BMW had placed an impossible burden on managers to be successful in selling regular cars and electric vehicles at the same time.

That shift in BMW's distribution of the i sub-brand in fact echoes what Kodak did a decade ago. Kodak built the first digital camera back in 1975, and was the first to put out a competent product, but then ended up folding its consumer

digital and professional divisions back into its legacy consumer film divisions in 2003. Meanwhile, Nikon, Sony, and Canon kept innovating in the subsequent decades, with features like face detection, smile detection, and in-camera red-eye fixes. We all know what eventually happened to Kodak.

Still, BMW is by no means a laggard in innovation. According to the objective composite index in Table 1 above, BMW is not bad. Yet, there exists a marked difference between the good and the great, a distinction between those who can scale up disruption and those who stay in the prototyping phase. The inconvenient truth remains that: scaling up a disruptive business is always costly. A new initiative can suffer financial losses for years, if not decades, and will be unlikely to achieve the level of profitability of the core business in the foreseeable future. BMW has been profitable for a very long time; Tesla is still operating at a loss today, as is Uber. This is why incumbents need to consider an alternate investment structure, allowing third-parties, venture capitalists, and even competitors to take an equity stake.

4. FROM CO-EXISTENCE TO MONOPOLISTIC COMPETITION

The reason why Uber, which makes no cars, is valued in excess of U.S.\$50 billion at the time of this writing, and is commanding a market capitalization higher than that of Ford, BMW, or Honda, is in large part due to its being a “platform” company. In explaining the dynamics of a “platform economy,” as opposed to those of a traditional economy, economists and business researchers emphasize the idea of the “network effect.” The value of a platform largely depends on the number of users on either side of the exchange. The more riders a ride-sharing platform has, for instance, the more attractive it becomes to drivers, leading even more people to use it. And once a platform reaches a certain size, the thinking is that it becomes too dominant to unseat. In other words, a platform economy has no room for multiple players; the market equilibrium will forever move toward a monopoly. That is how Google dominates search engines, Facebook rules social networks, Twitter towers over microblogging, and Netflix, YouTube, and Spotify have cornered the movie-streaming, video-sharing, and music-streaming markets, respectively. It is the winner that takes it all.

¹⁵ <https://bit.ly/2ptuEIA>

¹⁶ Grünweg, T., 2013, “Vollgas ins Risiko,” Der Spiegel, July 9, <https://bit.ly/2oBSh7E>

¹⁷ <https://bit.ly/2ptuEIA>

Considering such dynamics, the world will simply not be able accommodate so many automakers by the time electric vehicles, autonomous driving, and ride-sharing converge. Once mobility moves away from physical products (the individual cars that manufacturers sell) to on-demand services whose providers operate a variety of self-driving vehicles in fleets, the absolute volume of car sales will drop precipitously. Consequently, the industry will inevitably consolidate, with almost everyone but the very best descending, slowly but inexorably, into irrelevance.

It is not just cars, however. The dilemma experienced by automakers is strikingly similar to the ones facing executives in banking and a host of other industries these days. Just as Detroit is being confronted by Silicon Valley, so too is Wall Street seeing the future of banking everywhere it turns. Turning to China, it sees Alibaba, whose Alipay system has become synonymous with mobile payment, and AntFinancial, Alibaba's finance subsidiary, which is now worth U.S.\$150 billion – more than Goldman Sachs.¹⁸ Looking homeward, it sees that startups like Wealthfront, Personal Capital, and Betterment have all launched robo-advisors as industry disruptors. In retail checkout lanes, it sees Square or Clover or PayPal Here taking in credit card payments on behalf of millions of small-time merchants. It sees that the future of banking is not only about big data analytics, but also about drawing on and bundling groups of financial services that take place in real time, with minimal human interaction.

In fact, this data intelligence is the only first-mover advantage that matters. A smart infrastructure that automatically interacts with customers, continuing to improve its algorithm, and adjust its response without human supervision as it handles data gushing in from all around the world at millions of bytes per minute, is essentially a basic competency for any finance institute going forward. Deep-learning-based programs can already decipher human speech, translate documents, recognize images, predict consumer behavior, identify fraud, and help robots “see.” Most computer experts would agree that the most direct application of this sort of machine intelligence is in areas like insurance and consumer lending, where relevant data about borrowers – credit scores,

incomes, credit card histories – is abundant, and the end goal, such as minimizing default rates, can be easily defined. That explains why today, no human eyes are needed to process any credit requests below U.S.\$50,000.

But data intelligence also grows in a positive feedback loop, similar to that of the network effect. The more data that are used, the more valuable the business becomes. Google Maps becomes more accurate as more people use it. When the underlying algorithms gain more data to work with, the apps become even more accurate, and consumers like them even more. It is this peculiar dynamic that becomes problematic for traditional banking incumbents when they attempt to scale up their own digital footprints.

Google has made two decades' worth of investments to digitize all aspects of its workflow, not because the company had a clear notion from day one of what it wanted to predict, but because it is the sort of groundwork that had to take place before a well-defined strategy for AI could be established. Google had digitized everything before a clear view of AI had even fully emerged. Meanwhile, inside many traditional banking companies, managers are often tasked with considering how many different types of data are needed. Data are understandably expensive to acquire, so investment conventionally involves a trade-off between the benefit of more data and the cost of acquiring them. How many different sensors are required to collect data for training? How frequently do data need to be collected? More types, more sensors, and more frequent collection processes mean higher costs along with the potentially higher benefits. In thinking through these decisions, managers have to carefully determine what they want to predict, guided by the belief that this particular prediction exercise will tell them what they need to know. This thinking process is similar to the “re-engineering” movement of the 1990s, during which managers were told to step back from their processes and outline the objective they wanted to achieve before beginning the re-engineering. It is a logical process, but the wrong one.

¹⁸ Cheng, E., 2018, “How Ant Financial grew larger than Goldman Sachs,” CNBC, June 8, <https://cnb.cx/2LUGG3u>

Table 2: Ranking of leading financial services companies based on “leap readiness index”

COMPANY NAMES	SCORE	RANK
MASTERCARD	100.00	1
VISA INC.	93.98	2
GOLDMAN SACHS GROUP	75.49	3
PAYPAL HOLDINGS	69.03	4
SQUARE	63.41	5
WELLS FARGO & CO.	61.87	6
BANK OF AMERICA CORP.	61.48	7
CITIGROUP INC.	61.25	8
CREDIT SUISSE AG	56.06	9
JPMORGAN CHASE & CO.	52.28	10
HSBC HOLDINGS PLC.	51.66	11
UBS AG	50.42	12
BNP PARIBAS	49.54	13
SWISS LIFE AG	49.33	14
PRUDENTIAL PLC	46.73	15
BARCLAYS BANK PLC.	46.61	16
PING AN INSURANCE	44.18	17
ALLIANZ SE	41.92	18
BBVA	40.58	19
AXA SA	39.22	20
PRUDENTIAL FINANCIAL INC.	37.93	21
CNP ASSURANCES	36.96	22
ZURICH INSURANCE GROUP	35.78	23
CHINA MERCHANTS BANK CO.	35.24	24
DBS BANK	34.30	25
CHINA LIFE INSURANCE CO.	33.40	26
MUNICH RE	28.86	27
BANCO SANTANDER SA	28.50	28
CREDIT AGRICOLE S.A.	28.32	29
METLIFE INC.	28.16	30
BANK OF CHINA LTD.	27.74	31
DEUTSCHE BANK AG	25.05	32
OCBC BANK	24.88	33
AMERICAN EXPRESS CO.	24.34	34
STANDARD CHARTERED PLC.	24.28	35
ING GROEP NV	23.09	36
CHINA PACIFIC INSURANCE	22.02	37
ASSICURAZIONI GENERALI S.P.A.	19.59	38

CHINA CONSTRUCTION BANK	19.36	39
INDUSTRIAL & COMMERCIAL BANK OF CHINA (ICBC)	16.56	40
SOCIÉTÉ GÉNÉRALE SA	14.80	41
UNICREDIT SPA	13.23	42
AMERICAN INTERNATIONAL GROUP INC. (AIG)	9.09	43
AGRICULTURAL BANK OF CHINA LTD.	0.00	44

Any data scientist would confirm that datasets become exponentially more valuable when you combine them. Combined datasets often reveal insights and business opportunities that could not have been imagined previously. When Google introduced Gmail, it built a dataset for identity in addition to its search engine dataset. Combining the two datasets created a geometric increase in value, as its AdWords ads would then be capable of providing more value to advertisers and, by extension, to Google. The same thing happened again with Google Maps, which enabled Google to tie identity and purchase intent to location. In each instance, it was only after Google had introduced a new service that the company could then find new scenarios for user data in which combining datasets would be even more valuable. The real value resides in the metadata – the data about data. This is the essence of “you don’t know what you don’t know.”

Put differently, the application of AI renders conventional budget allocations ineffective when banking incumbents seek to scale their digital initiatives. Great businesses often seem like bad ideas when they first appear because their models don’t include proven examples of why they’ll work. This is why banking incumbents have no choice but to follow a disruptive playbook, but with a twist.

5. EMBRACE DISRUPTORS, DON’T SMOTHER THEM

What Table 2 illustrates is a similar composite index to the one used in the automotive sector, but this time, it measures the readiness of each financial institute to leap toward a new frontier of knowledge, and is specifically relevant to the financial sector: mobile payments and services, cryptocurrency and blockchain, AI, and application programming interfaces (APIs).

To achieve a balanced and robust measurement, we take note of the “health” of a company’s ongoing business – the idea that a firm can invest in the future only if it maintains a healthy, ongoing cash flow. Hence, operating margins and

rising revenues matter. But for that healthy cash flow to be effectively deployed into new areas, executives need to see beyond their day-to-day operations and be capable of challenging the long-held assumptions of the industry. This process demands diversity in a company's workforce, which is represented by gender and nationality as well as the specific backgrounds of the top leadership.¹⁹ Even if a current CEO is promoted from within the firm, the best-case scenario is what we call the "inside-outsiders." Legendary CEO Jack Welch of GE is the prototypical inside-outsider. He came from GE's then-peripheral plastics business, stuttered, had a Boston accent, and was a chemical engineer in a company of mechanical and electrical engineers. Such inside-outsiders know the organization and its culture as well as its people and their capabilities – but they also retain a strong sense of objectivity. Far from just drinking the company Kool-Aid, they understand why and how the company has to change in order to deal with new opportunities and challenges posed by changing markets and technology. From here, we then measure the company's growth prospects as gauged by investors' expectations, which are reflected in the company's price-to-earnings ratio (P/E ratio), the intensity of its investment in startups or new ventures, and, perhaps most importantly, its new product announcements, its announcement frequency, and its press coverage in new areas related to robo-advisors and chatbots, cryptocurrency and blockchain, AI, and APIs.

Unsurprisingly, the index in Table 2 includes a few household names among the fintech developers. PayPal, a digital payments firm that turns 20 this year, and Square, which processes credit card payments from street stalls to coffee stands to fancy farmers' markets, are both sitting on top of the rankings. And yet, several incumbents have managed to grow just as fast. None are retail banks. The leading incumbents, it turns out, are the legacy infrastructure builders: Visa and Mastercard.

To understand Visa and Mastercard is to understand credit cards themselves. Like Google, Facebook, Uber, WeChat, and many other contemporary platforms, Visa and Mastercard did not make any profit in their initial decades. They did not

even look to make profit during their early days. They were only registered as not-for-profit membership associations,²⁰ although they were allowed to charge their members just enough to cover costs and provide working capital, before they eventually listed on the New York Stock Exchange six decades later.

In 1958, Bank of America, the largest bank in the U.S., as well as in the world, at the time mailed out some 60,000 unsolicited BankAmericards²¹ in Fresno, California, where it was headquartered at the time. What was unique about the BankAmericard, despite the its limitation of only being usable within the state of California, was that it could be used for any type of purchase at participating merchants, from general stores to gas pumps to restaurants. And unlike other early credit card programs, in which customers were required to pay their balances at the end of each month, BankAmericard was the first to offer revolving credit, allowing customers to pay off their balances over time.

This open approach to various type of merchants prompted numerous banks nationwide to license the card system from Bank of America over the following years. Its subsidiary, BankAmericard Service Corporation, provided other banks with cards and processing services – authorization, clearing, and settlement, including the enforcement of customers' credit limits, usually by means of a telephone call²² between an authorization center and the purchaser's banks prior to the arrival of the computer age. By 1968, BankAmericard was accepted in 42 states, with 41 issuing banks, and 1,823 associated banks. The card was also affiliated with banks in Canada, the U.K., Ireland, and Japan.

Bank of America maintained a virtual monopoly in credit card services for other banks for a few years, but its increasing influence worried those other banks, who then sought to shake free. It was a question of how to ensure BankAmericard Service Corporation would not prioritize processing its own credit card transactions at the expense of others. The obvious answer to this question was to create a cooperative association that could then act as a joint venture,²³ enabling members to share a centralized payment system while also competing

¹⁹ The importance of diversity and inventiveness is reflected even in the Nobel Prizes. Most winners in the U.S. are either first-generation immigrants or their offspring. That relationship between immigration and Nobel Prizes is not surprising when one reflects that the willingness to take risks and to try something drastically new is a prerequisite both for emigrating and for innovating at the highest level. Nobel Prize-winning research demands those same qualities of boldness, risk tolerance, hard work, ambition, and innovativeness. It turns out immigrants and their offspring also contribute disproportionately to American art, music, cuisine, and sports.

²⁰ Evans, D. S., and R. Schmalensee, 2016, "Some of the most successful platforms are ones you've never heard of," Harvard Business Review, March 28, <https://bit.ly/22l7nPw>

²¹ <https://bit.ly/2xtPzu2>

²² Campbell-Kelly, M., W. Aspray, N. Ensmenger, and J. R Yost, 2013, Computer: a history of the information machine, Westview Press

²³ <https://bit.ly/2HEE76D>

²⁴ <https://bit.ly/2pw9dXp>

fairly for their own benefit. By 1970, Bank of America ceded control²⁴ of BankAmericard to this newly created association, which was later renamed Visa, a term widely understood in many countries and across many languages to mean “universal acceptance.”

Around the same time, in 1966,²⁵ another group of California banks formed another association, which would soon issue the nation’s second major bank card, Mastercard. It marketed itself to ordinary²⁶ men and women, contrasting with Visa’s historical efforts to capture an upper-income clientele. In the following years, Visa and Mastercard poured resources into computerizing their centralized networks to electronically link the merchants who sold things to the cardholders and the banks that issued the credit cards and underwrote the credit lines for the cardholders. The value of U.S. credit card purchases grew from U.S.\$426 billion in 1993 to U.S.\$2.17 trillion in 2007.²⁷ Americans increasingly flexed plastic rather than cash to pay for just about everything. The plastic was everything for Visa and Mastercard.

Then, the inevitable happened. Following the lead of Mastercard, which went public in 2006, Visa carried out its own IPO in May 2008, which became the largest U.S. IPO at the time as measured by valuation.²⁸ Still, Visa and Mastercard are similar to a toll road – they collect a fee on every swipe of their plastic cards – and any such established business that relies on a legacy infrastructure is always under threat from an emergent player that could pull customers – cardholders, merchants, and banks, in this case – over to a new ecosystem. Hence, the longevity of the two existing networks and the enormous growth that they continue to enjoy can only be explained by the two opposing strategies that these two now publicly traded companies have embraced so completely.

One strategy to defend a company’s market share when a new offering is making inroads is to improve its existing technology, which can result in a prolonged period of coexistence. Visa and Mastercard have, therefore, exploited all possible extension opportunities. When they saw Mobil, now part of Exxon, introduce Speedpass, a little black tube²⁹ for customers

to attach to a keychain and wave in front of the pump at the gas station to charge their purchase – which is, in effect, a proprietary system that functions as a store card – Visa and Mastercard started working with third-party merchants on a host of smart chip technologies for “contactless payment,” “touch-and-go,” and “pay-with-a-wave” transactions. When they saw the proliferation of personal passwords, which made remembering the additional password of a new credit card impossible, Visa and Mastercard unveiled a card with an embedded fingerprint scanner,³⁰ a small square sitting at the top right-hand corner that acts as a biometric reader. All these innovations were meant to improve the performance of their existing offerings in order to forestall substitution by new solutions.

At the same time, since the dawn of the smartphone era, too many new entrants providing payment methods – Apple Pay, Google Wallet, Square, PayPal, Vimeo, and Revolut, just to name a few – have all proven themselves powerful innovators that can design offerings that consumers crave. Accordingly, they have carved segments of the market away from the credit cards that traditional retail banks issue. And in the face of these changes, the only proven strategy Visa and Mastercard can rely on in order to maintain the relevance of their legacy infrastructure is to bypass their own plastic, de-emphasizing and destroying the very physical embodiment of their products that was cherished for decades, and allowing these disruptors to connect into their own toll road. If you can’t beat them, let them join you.

It should, therefore, come as no surprise that at the Apple event in March this year, when the Apple card was announced, commentators noticed,³¹ in addition to the card’s “subtle off-white coloring” and “the tasteful thickness of it,” the Apple logo emblazoned in all its minimalist glory. The card promised breakthrough features such as no fees of any kind and AI software that would actively encourage users to avoid debt and provides recommendations to pay it off quickly. Sharing space on the back side of the card are the logos of Goldman Sachs, the underwriter, and Mastercard. Not even Apple can shake off the plastic network.

²⁵ <https://bit.ly/2ox0t0R>

²⁶ <https://bit.ly/2nXLoY2>

²⁷ <https://bayareane.ws/2pvTKXr>

²⁸ <https://bit.ly/2vqzED>

²⁹ Dean, R., 1998, “Speedpass gas,” *Wired*, April 1, <https://bit.ly/2nLhdmV>

³⁰ Burgess, M., 2017, “Mastercard trials biometric bank card with built-in fingerprint sensor,” *Wired*, April 20, <https://bit.ly/2ox85iu>

³¹ Savov, V., 2019, “The Apple Card is Apple’s thinnest and lightest status symbol ever,” *The Verge*, March 25, <https://bit.ly/20puRow>

And it is not just Apple. PayPal, Square, Samsung Pay, Google Pay, Facebook Credits, Stripe,³² and even Coinbase, a cryptocurrency upstart,³³ all work with Visa and Mastercard. In other words, no fintech can disrupt anyone unless they pay a toll to the old boys' network. The reason is simple. An interface standard has emerged that has made Visa and Mastercard so simple and powerful to work with that their vast networks are irresistible for any fintech: application programming interfaces (API).

In the simplest of terms, an API is an official set of rules and guidelines that facilitates the exchange of information between two pieces of software. These software routines, protocols, and tools can, therefore, allow third-parties to tap into Visa and Mastercard's infrastructure. "While many legacy bank players have been hesitant to see Visa as primarily a technology company," observed Gilles Ubaghs,³⁴ senior analyst of financial services technology at Ovum, "the recent launch of Visa's Developer platform, ... with a host of APIs offering a full mix of payment functionality, all built on Visa's underlying core network, [shows that] Visa is opening up its full capabilities directly to the broader digital ecosystem."

The major breakthrough here, then, is the realization that a product's best feature will never be invented in-house. Visa and Mastercard realize that killer apps must be invented by third-parties, who are closer to their own customers. For someone who runs a legacy infrastructure, the best strategy is to allow others to discover new uses for the existing system. Whenever a third-party application becomes significant enough, the system co-opts it in order to remain flexible, all the while setting new standards for the industry.

In fact, setting new standards is exactly Visa and Mastercard have in mind. Both networks are launching "tokenization services,"³⁵ which generate a unique token for each individual credit card, rather than using conventional credit numbers, in order to prevent hackers from accessing important information. If anything, Visa and Mastercard are becoming the payment sector equivalents to what standard setting organizations (SSOs) are for telecom. SSOs have helped drive the major technological revolutions of the last several decades, including the internet and mobile phones. Mobile carriers, handset makers, and chip providers, for example, all have to agree on a common standard – like 5G – in order

for what they do to work together. Every generation of mobile phones since the early 1990s has followed years of effort by an SSO to create standards. The SSO usually publishes a standard and disseminates it at low cost, or even for free. Industry observers tend to give a lot of credit to Apple, Google, and Samsung for developing great mobile software platforms. But Android and the iOS would not have been possible and, in fact, probably wouldn't have been created if SSOs had not created the technology platforms to provide fast and capacious broadband. Inside the massive information technology industry, SSOs are the most successful platforms consumers have probably never heard of.

There may come a day when credit cards themselves disappear, but Visa and Mastercard can still be ubiquitous, still making all the hard parts of sending and receiving money around the world look easy. In that world, their only real competitor is perhaps UnionPay, China's monopoly bank card service provider.

6. MANAGING BY COMMITMENTS

From Amazon to Square to Ant Financial, from Tesla to Uber to PayPal, profitability is not the most important metric for managers – the user base and market share are. That is also why banking and automotive incumbents need to consider an alternative investment structure, allowing third-parties, venture capitalists, and even competitors to take an equity stake. Such a structure seems controversial but is not unprecedented. Alibaba does not own all of Ant Financial, and Uber now owns a minority share of its Chinese rival, Didi, after exiting China. (Today, Didi provides twenty million rides per day in China, over triple the volume of Uber worldwide.)

And it is not just capital, it is also structure and the reporting line. Treat the new initiative as a company within a company. A classic example is Steve Jobs' approach to managing the original Macintosh team, which had separate offices that were off-limits to regular Apple employees. Larry Page applied the same technique to Android by allowing Andy Rubin's team to work in separate offices – Google employee badges did not grant access to the Android offices – and adopt different hiring practices than those of the parent company. The same was largely true for the PlayStation project at Sony, the Kindle project at Amazon, and the Watson team at IBM.

³² <https://bit.ly/2oCqu0v>

³³ Mearian, L., 2019, "Visa and Coinbase team up to create crypto-backed debit card," ComputerWorld, April 11, <https://bit.ly/2psFFd3>

³⁴ Samuely, A., 2017, "Visa's open APIs signal battle against Silicon Valley payment platforms," Retaildive, <https://bit.ly/2oAREoE>

³⁵ Jaekel, B., 2017, "MasterCard brings tokenization to retailers' mcommerce apps for added security," Retaildive, <https://bit.ly/2puQ87V>

This combined strategy of external capital and structural autonomy was adopted by GM's CEO Mary Barra, and it paid off handsomely in May 2018, when SoftBank announced a U.S.\$2.25 billion investment in Cruise Automation, the self-driving unit of General Motors, headquartered in San Francisco. The investment pushed Cruise's valuation, originally purchased by GM for U.S.\$581 million, to U.S.\$11.5 billion. It takes more than a vision, belief, passion, and experimentation with AI to transform a company, it takes autonomy and a pocket so deep that it includes other people's money. It is an unconventional approach taken during an unconventional time.

Lest executives excuse themselves from exploring these radical approaches and forestall changes, thinking that their organizations can bide their time, the travails of Procter and Gambles (P&G) illustrate the necessity of facing the inevitable.

7. BOARDROOM SOAP OPERA AT P&G

No industry is changing faster than retail. A recent report in 2017 by the consultancy BCG documented a general decline in sales³⁶ among consumer-packaged goods (CPG) companies in the U.S., with mid-sized and large companies losing market share and small companies increasing theirs. Consultancy Catalina also revealed that 90 of the 100 top brands³⁷ had all lost market share. In dollar terms, small players – defined as those with sales less than U.S.\$1 billion – grabbed approximately U.S.\$15 billion in sales from their larger peers between 2012 and 2017. Shoppers now purchase more online, making fewer trips to stores, and seeing fewer in-store promotions. A small but trendy razor club with a hip logo, Harry's,³⁸ attracts more Instagram followers and product subscriptions through its website than a fully stocked Gillette aisle in a supermarket ever could. Hence, Harry's has been growing 35% year-on-year between 2014 to 2016, three times faster than the industry average,³⁹ commanding 9% of all online razor sales.

Whereas the Gillette aisle in the local supermarket targets exactly one neighborhood, Harry's website reaches millions. Harry's bolsters the subscription habits of its recurring consumers, whereas Gillette relies on in-store impulse buying. When someone buys a razor in a store, Gillette has no clue who is buying what and when; Harry's knows it all.

Newcomers like Harry's still represent only a fraction of the overall market,⁴⁰ but they have captured the majority of the growth in that time – a defining feature of disruptive innovation. This in part explains why consumer product giants like Procter & Gamble are seeing their sales of products like Tide detergent, Gillette razors, Pampers diapers, and Crest toothpaste stagnate, despite the fact that the “restructuring at P&G has been going on for 20 years,” according to one former finance manager, “without much to show for it.”⁴¹ It seems that no matter how much P&G tried reorganizing itself, it cannot reverse the decline from U.S.\$83 billion in sales in 2008 to U.S.\$65 billion in 2017.⁴² With its total return – stock performance plus reinvested dividends – is about half of that of Kimberly-Clark and Colgate-Palmolive, P&G has inevitably attracted unwanted attention from active investors, who believe the maker of Tide and Pampers has not been moving fast enough to revive sales and profits.

Unlike 1980s corporate raiders, today's activist hedge funds do not usually seek to take over companies outright in order to break them apart and “unlock shareholder value.” Nelson Peltz, of Trian Fund Management, for instance, bought a 1.5% minority stake of P&G worth U.S.\$3.3 billion shares, so as to press for reforms. Trian's 94-page presentation⁴³ detailed how granting Mr. Peltz a board seat could help shareholders to “revitalize P&G together.” Peltz attacked P&G's “suffocating bureaucracy and excessive costs which create structural drags on the business,” and the current management team's “short-term thinking (selling businesses versus fixing businesses, cutting ad spend last quarter, etc.) that doesn't address the root causes of P&G's challenges,” and promised to fix P&G's “innovation machine,” in order to realize the company's agenda of “winning in digital” and “improving development of small, mid-size & local brands, both organically and through M&A.” Peltz was not trying to break up the company, nor was he suggesting replacing the current CEO. Nor was he seeking to cut pension benefits or reduce R&D and other capital and marketing expenditures. His no-nonsense talk was to appeal to retail investor votes and index funds, trying to win them over for a “proxy fight” during a meeting of shareholders on October 10, 2018.

³⁶ Edelstein, P., Krishnakumar (KK), S. Davey, A. Gupta, S. Marcus, J. Brennan, and C. Loeyes, 2018, “What the fastest-growing CPG companies do differently,” Boston Consulting Group, June 14, <https://on.bcg.com/2IV413I>

³⁷ Lukovitz, K., 2015, “Top 100 CPG brands' sales, market share down, even as overall categories grow,” MediaPost, September 30, <https://bit.ly/2n2bPLB>

³⁸ <https://bit.ly/2xf7HbB>

³⁹ <https://bit.ly/2n79kYC>

⁴⁰ <https://bit.ly/2nZKdap>

⁴¹ <https://nyti.ms/2yShjc7>

⁴² <https://on.wsj.com/2o14ext>

The lead-up to the shareholders' meeting ended up being the most expensive proxy fight in the annals of corporate America. While Trian hired the former P&G CFO Clayton Daley as an advisor,⁴⁴ the activist hedge fund also ran a sophisticated campaign to reach retail shareholders in September, inundating them with mailings, phone calls, and outreach, featuring sleekly produced websites and videos, on social media platforms. Meanwhile, P&G enlisted the help of four banks⁴⁵ – Goldman Sachs, Morgan Stanley, Centerview and Lazard – to defend its cause. CEO David Taylor appeared on Jim Cramer's Mad Money,⁴⁶ saying Peltz was "dangerous" and would "eliminate" R&D. Former P&G CEO, A.G. Lafley, came out against Peltz, arguing that the investor's "game plan" involved "cost cuts, board and management shake ups, asset sales and break ups." Both sides were courting independent investors who were set to vote on whether to add Mr. Peltz to the board. P&G vehemently argued the contender "[brought] no new ideas to the table," while Peltz said the management team "[had] lost and [were] continuing to lose market share."⁴⁷ Put differently, P&G's claim was that it had already launched initiatives to solve the problems that Peltz said he had identified; Peltz argued the efforts were insufficient. By September 22nd,⁴⁸ Glass Lewis, one of two major shareholder advisory firms, urged investors to back Peltz and his "cogent well-framed arguments." And on September 29th, Institutional Shareholder Services gave Peltz another boost, saying he presented a "compelling case." During the campaign, at least U.S.\$60 million dollars were reportedly spent by both sides to sway investors to their viewpoint.⁴⁹

Ultimately, P&G emerged victorious.⁵⁰ At its announcement of the election results on October 10, it revealed shareholders had voted against Peltz and re-elected all 11 incumbent directors, but with a wrinkle. Institutional investors split their vote, with two of the three largest groups – State Street Global Advisors and Blackrock – supporting Peltz, and the other – Vanguard – supporting management. The wrinkle remains that P&G's victory was based on only "preliminary results"⁵¹ tallied that day, not all the votes cast. All in all, Peltz lost by just 0.2% of P&G's 2.65 billion eligible shares: he received 48.6% of the vote to P&G's 48.9%, losing by a margin of 0.0016% of the total shares outstanding.⁵² "We'll talk," CEO Taylor said to Peltz, extending a hand. "We'll talk but we don't listen," Peltz replied, to which Taylor insisted, "No, no, no, that's not true."

With the result being "too close to call," P&G agreed in December 2018 to give Nelson Peltz a seat on its board.⁵³ It also added the CEO of pharmaceutical giant Novartis, Joseph Jimenez, to its board effective March 1, 2019, thereby increasing the board from 11 members to 13.

The vote's thin margin also means there remains work for P&G to do in order to regain the support of a large percentage of its shareholders, to whom Peltz wrote on an email that "I look forward to bringing fresh perspectives to the boardroom, and working collaboratively with (CEO) David and the rest of the board."⁵⁴

It will forever be impossible to quantify the effect of the two new board members on P&G's own trajectory. What is clear is that the company can no longer be a mere "industrial corporation with a future based on technology"; rather, it must become a house of startup brands that runs pop-up stores, makes home deliveries, celebrates communities with parties, fosters subscription models, and curates compelling product personas, all while gathering comprehensive consumer data to guide new product innovation. That is the long-term goal. In the short term, P&G immediately went to war to clean up the online ad market and used its pull as the world's biggest advertiser to squeeze more information about the effectiveness of digital ads out of Google and Facebook. It slashed digital ad expenditures by more than U.S.\$200 million and issued an ultimatum for tech firms to become more transparent.

Then in early February 2019, P&G's Tide – the highest-selling detergent brand in the world – announced it was doubling the size of its laundry store business, aiming to have more than 2,000 cleaning stores by the end of 2020 across the U.S.⁵⁵ Such is P&G's approach to going after urban millennial and Gen Z consumers and becoming a direct-to-consumer business, all while weaning itself off its total dependence on other e-commerce giants. One can simply walk into one of its airy, bright, and colorful laundry stores, which stand worlds apart in a market dominated by mom-and-pop laundromats. Features include a 24-hour drop-off and pickup kiosk, a two-lane car-side valet service, and free same-day service for drop-offs by 9 a.m.

⁴⁴ <https://bit.ly/2nXvCML>

⁴⁵ <https://cnb.cx/2g9B2k6>

⁴⁶ <https://bit.ly/2oFMMi8>

⁴⁷ <https://on.wsj.com/2oEOb8i>

⁴⁸ <https://bit.ly/2nXvCML>

⁴⁹ <https://nyti.ms/2yShjc7>

⁵⁰ <https://bit.ly/2zbCKpr>

⁵¹ <https://bit.ly/2pus18a>

⁵² <https://on.wsj.com/2ssAcUl>

⁵³ <https://on.ft.com/2n049xa>

⁵⁴ <https://cnb.cx/2jctjQ4>

⁵⁵ <https://cnn.it/2pvdgmL>

Table 3: Ranking of leading consumer brand companies based on “leap readiness index”

COMPANY NAMES	SCORE	RANK
UNILEVER PLC.	100.000	1
NESTLE S.A.	89.168	2
PROCTER & GAMBLE CO.	81.756	3
COCA-COLA CO.	80.399	4
L'OREAL SA	73.466	5
MCDONALD'S CORP.	71.949	6
STARBUCK COFFEE CO.	64.832	7
ALTRIA GROUP INC.	60.160	8
COTY INC.	58.876	9
BRITISH AMERICAN TOBACCO PLC.	55.532	10
PEPSICO INC.	52.052	11
RECKITT BENCKISER GROUP	49.608	12
DIAGEO PLC.	49.401	13
FONTERRA CO-OPERATIVE GROUP	48.037	14
PERNOD RICARD SA	47.603	15
KRAFT HEINZ CO.	47.002	16
SHISEIDO CO.	46.693	17
ESTEE LAUDER COMPANIES INC.	46.448	18
ANHEUSER-BUSCH INBEV SA/NV	45.120	19
COLGATE PALMOLIVE CO.	42.087	20

The average American spends more than an hour per day – up to 372 hours every year⁵⁶ – sorting, washing, drying, and folding laundry. And laundry came out as one of the most-hated household chores, only surpassed by toilet-cleaning and doing the dishes. But the nice decorations and polite staff members at Tide Cleaners are not the point. For P&G, the point is that the service is tied to its Tide Cleaners app, where consumers submit cleaning instructions and their drop-box number and are notified when their washing is ready for collection. To access the pickup kiosk, for instance, customers register for the cleaner's rewards program by entering their email addresses and credit card information. When their order is ready, customers receive an email alert and can pick up their garments at the kiosk by inputting their four-digit PINs or by scanning a QR code from their smartphone. P&G used to

know nothing about who was buying Tide detergent from the local grocers and supermarkets, but now it knows exactly who is using Tide Cleaners as well as how and when they use it. Some say “data is the new oil,” but P&G understands direct customer service is the new oilfield.

Strategy, in the end, is about leveraging one's unique assets to deliver a competitive punch in the marketplace. While P&G has no edge in a competition against Amazon for an e-commerce website, the Tide brand still commands the advantage of instant recognition and a likeability score higher than Starbucks and Chick-fil-A.⁵⁷ That means taking a traditional product into a direct consumer business would, for the first time, allow P&G to play a different game, access a new trajectory of learning, and even experiment with a new business model. It would require more than industry benchmarking. No consultant could convince a skeptical management team to undertake such seemingly “unrelated diversification.” But for the 180-year-old P&G to prosper for another century, it must take some bold steps to break away from its past.

Nelson Peltz's proxy war was a warning shot to blue-chip companies that activist investors are setting their sights on ever-bigger corporate targets – whether it is auto, retail, or even pharmaceutical giants – as they agitate for changes in strategy and structure by asserting direct control over corporate decisions. And P&G, one of the largest consumer-packaged goods (CPG) companies finally climbed back into the major leagues, as shown in Table 3, after its tumultuous proxy fight. The fight does signify⁵⁸ that “no company is off limits because of its size, industry, the complexity of its business or even its stock price performance.”

8. A FINAL WARNING AND ONE LAST FLASHBACK

Adjacent to the Mercedes-Benz museum in Stuttgart, Germany, is one of the largest Mercedes dealerships in the world, which I also visited during the autumn of 2018. Its cavernous main hall is preceded by a restaurant, a café, and a shop hawking Mercedes-Benz merchandise. I saw a vertical banner stretching down from the ceiling to the floor along the glass panels on one wall. “Ready to change,” the banner cheered. “Electric intelligence by Mercedes-Benz.” It

⁵⁶ <https://bit.ly/2nZKzOf>

⁵⁷ <https://bit.ly/2pnhLzB>

⁵⁸ <https://nyti.ms/2yShjc7>

referred to Concept EQ, a brand of electric plug-in models first unveiled in Stockholm on September 4, 2018. I found three EQs on display, right next to an exhibition kiosk that did not work. It was presenting an error alert, and had tangled cables spilling out from its backside, which had come unglued. Then, an escalator took me to the top floor, where I found visitors gawking at a Mercedes-AMG, known for its “pure performance and sublime sportiness.” Here was the vision of a forward-looking sport car with all the driving pleasure fully realized. The risers and the wrap-around LCD walls only accentuated the carbon-fiber composites of the chassis glowing in matte black. One thing I did also notice was that the rating of CO2 emissions of this Mercedes-AMG GT 63 S, with its 630 horsepower, was an F.

APPENDIX: METHODOLOGY AND DATA

This appendix presents a short description of the calculation behind the “leap readiness index” for the automotive industry, financial services, and consumer packaged goods sector in 2019.

employee diversity, (4) research and development, and (5) early results of innovation efforts. These five main factors are tracked by 20 separate indicators that carry the same weight in the overall consolidated result.

To compile the 2019 Leap Readiness Index for the financial sector (Table 2), we have included 44 top retail banks, insurance services, and leading payment companies based on their revenue by the end of 2018. The ranking is based on six main factors: (1) financial fundamentals, (2) investors’ expectations of future growth, (3) employee diversity, (4) business productivity, (5) early results of innovation, and (6) openness to new ideas. These six main factors, which carry the same weight in the overall result, produce 21 indicators.

Similarly, the 2019 Leap Readiness Index for the consumer-packaged goods sector (Table 3) which included 20 top companies by their revenue as the end of 2018 (with the rest of the top 44 companies available from the authors), is also built on six main factors: (1) financial fundamentals, (2) investors’ expectations of future growth, (3) employee diversity,

FINANCIAL PERFORMANCE	BUSINESS DIVERSITY	EMPLOYEE DIVERSITY	RESEARCH AND DEVELOPMENT	EARLY RESULTS OF INNOVATION
<ul style="list-style-type: none"> • % of international sales last year • 3Y CAGR turnover • 3Y CAGR mkt cap • 3Y average profit change • P/E ratio last year 	<ul style="list-style-type: none"> • Press count on “corporate venturing” • Number of patents • Number of acquisitions • Number of investments 	<ul style="list-style-type: none"> • % of women employees • % of women management board members • CEO demography • Headquarter competitiveness 	<ul style="list-style-type: none"> • 3Y CAGR R&D intensity • 3Y average R&D intensity • 3Y CAGR R&D expenses 	<ul style="list-style-type: none"> • Press count on “autonomous vehicles” • Press count on “EVs” • Press count on “connected cars” • Press count on “sharing mobility”

Table 1 includes the top 20 (with the rest of the top 55 available from the authors) automakers and component suppliers by revenue, as at the end of 2018. The ranking measures five factors: (1) financial performance, (2) business diversity, (3)

(4) business productivity, (5) early results of innovation, and (6) openness to new ideas. These six main factors are tracked by 19 indicators that carry the same weight in the overall result.

FINANCIAL FUNDAMENTALS	INVESTORS' EXPECTATIONS OF FUTURE GROWTH	EMPLOYEE DIVERSITY	BUSINESS PRODUCTIVITY	EARLY RESULTS OF INNOVATION	OPENNESS TO NEW IDEAS
<ul style="list-style-type: none"> • 3Y CAGR turnover • 3Y average profit rate • 3Y average EPS • AUM (asset under management) last year* • 3Y CAGR AUM • Equity-to-asset ratio** 	<ul style="list-style-type: none"> • P/E ratio last year • Price-to-book value last year** • 3Y CAGR market capitalization 	<ul style="list-style-type: none"> • % of women management board members • CEO demography • Headquarters competitiveness 	<ul style="list-style-type: none"> • AUM per employee last year* • Operating revenue per employee last year • Loan-to-deposit ratio** 	<ul style="list-style-type: none"> • Press count on “blockchain” • Press count on “mobile services” • Press count on “AI” 	<ul style="list-style-type: none"> • Press count on “APIs” • Press count on “ventures” • Number of investments in the last three years

Notes

* For payment companies, we use “the number of transactions” as a proxy.

**We treat payment companies differently than other financial service companies.

FINANCIAL FUNDAMENTALS	INVESTORS' EXPECTATIONS OF FUTURE GROWTH	EMPLOYEE DIVERSITY	BUSINESS PRODUCTIVITY	EARLY RESULTS OF INNOVATION	OPENNESS TO NEW IDEAS
<ul style="list-style-type: none"> • 3Y CAGR turnover • 3Y average profit rate • 3Y average EPS 	<ul style="list-style-type: none"> • P/E ratio last year • 3Y CAGR market capitalization • Enterprise value / EBITDA last year 	<ul style="list-style-type: none"> • % of women management board members • CEO demography • Headquarters competitiveness • % of women executive committee 	<ul style="list-style-type: none"> • Revenue per employee last year • 3Y average profit per employee • Number of Facebook likes for top brand 	<ul style="list-style-type: none"> • Press count on "sustainability" • Press count on "omnichannel" • Press count on "subscription" 	<ul style="list-style-type: none"> • Press count on "venture" • Number of acquisition in the past three years • Number of investments in the last three years

All of our indicators are hard data; that is, they are publicly available on company websites and in annual reports, press releases, news stories, and special reports on topics such as corporate social responsibility. For press count data, we consulted Factiva, a global news database that covers various premium sources, and counted the number of press releases on each trending topic previously identified in this sector that had been issued over the past three years (2016–2018). The data was also supplemented by third-party data sources from CrunchBase, which specializes in the topic of corporate ventures.

To calculate the index, we first collected historical data for each company. Then we performed calculations for each indicator (e.g., 3Y CAGR) before we standardized the criteria data. Next, we aggregated indicators to the main factors and then determined the overall ranking. For the purpose of comparison, we ranked each company from 1 (best) to 55/44 (worst) on a scale of 0 to 100.

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