Report
DYNAMO 96
4/4 2017

Platforms

In the two previous Reports, we have gone through a more arduous path to describe some conceptual fundamentals that together explain the dominant characteristics of digital reality. Immateriality, processing power, and connectivity have brought the network paradigm to the center of the analytic tool box. We have seen theoretical explanations for some recurrent empirical realities in this new environment, such as market concentration/ dominance. Additionally, using the framework of the conventional economy as a background, we could highlight the main characteristics of the logic of networks. Having established this context, we are able to select specific subjects in the vast portfolio of digital themes. In this Report, we will deal with a business model that has been promoting a real changes in the competitive landscape of industries.

In October 2007, two young designers, newcomers to San Francisco, realized they could not afford their rent. They then placed a mattress in their living room and placed an ad for accommodation and breakfast in the community's online paper. The idea of subletting their spare room in order to make rent would evolve into Airbnb, the world's largest hospitality marketplace today. Airbnb offers more than three million accommodations in 65 thousand cities across 191 countries. In nine years of activity, it accumulated over 140 million bookings. The company does not carry any inventory, nor has it ever built a unit. It is a privately held company that was valued at $31 billion in their last investment round. As a comparison, Hilton Worldwide, which began operating in 1919 and runs the largest hotel chain in the world, with over 770 thousand rooms across 4,700 hotels, has a market value of $23 billion.

Uber also emerged from the personal experience of one of its founders, who was outraged by the fact that he had to pay $800 for a black car (private driver) service. The company started operations in 2009 and officially began offering its services in San Francisco in 2011, when its mobile app was ready. In 14 rounds of funding, the company raised $11.5 billion. In May 2017, Uber had a market share of 77% of rides in the United States.

These are well-known stories that illustrate the vitality of this new business model. If "software is eating the world", then someone must be having trouble searching for food. Taxicab licenses, once considered "the best business in America" and that in 2013 sold for $1.3 million apiece in New York, are now trading for $240 thousand, an 80% drop in only five years. From 2000 to 2014, revenues from online hotel bookings in the United States soared from $14 billion to $150 billion, while the number of travel agencies shrank in half, from 124 thousand to 65 thousand.

Airbnb and Uber are examples of the so-called platform business model. Platforms use technology to establish an infrastructure that allows users to connect from both sides in a trade. Airbnb connects property owners and guests. Uber connects drivers and passengers. The economic benefits of platforms are manifold. They increase asset utilization, reduce transaction costs, and act as catalysts by bringing new agents into the marketplace. Platforms reduce search costs and information asymmetry, promote more efficient matching, and make it easier for both groups of individuals to trade value between them.

If we had to use a single word to define the essence of this digital transformation we would use "connectivity". Bits, web, codes and software are simply ingredients. Platforms are the most appropriate organizational model for optimally aggregating dispersed participants, by establishing, as much as possible, denser and more abundant connections. As we have seen, given the immateriality of

the digital medium, the potential reach of these connections is unlimited.

As a business organization, platforms are not at all new. Railways, roads, electrical and telephone networks are all arranged as platforms, connecting two sides through a network structure. A major difference between today's platforms and traditional platforms is the presence of digital technology, which greatly expands the reach, speed, convenience, and efficiency of networks.

In today's platform environment, the internet is no longer defined as just a distribution channel. It also functions as an infrastructure provider and as a coordination mechanism, bringing the economic benefits of network effects, as well as production and distribution with near zero marginal costs.

The presence of platform companies brings about immediate impacts on direct competition, imposing a clear distinction between winners and losers. Hotels, travel agencies, and taxi drivers have been suffering from disruption. Second-order effects, which may also become significant, are more covert. With the increase in Uber's penetration, for example, parking lots in urban centers have already seen drops in revenue, including in some malls. With the spread of the sharing economy culture, a reduction in private vehicles' sales volumes is expected, producing effects in the entire automotive chain, from automakers to auto parts, with consequent repercussions in fuel consumption, ultimately reaching oil exploration. In addition, there are already talks of a trend towards urban decentralization. With the lower perceived cost of travel, individuals will live on the outskirts of cities, potentially causing important impacts on the dynamics of the real estate sector.

There are even more remote effects that the spread of technology has produced in the business environment. A curious example described in the book Exponential Organizations (Ismail 2014) is the case of car wash in Buenos Aires, where there was a 50% decline in volume in only one decade. After much research, it was concluded that the explanation was in accuracy improvements in weather forecasts. As a complex system with many stochastic variables, meteorology demands enormous capacities of information processing. With the increasing sophistication of computers, the predictions got better. Knowing when it was going to rain and possessing more confidence in weather forecasts, individuals had to wash their cars less often.

In this environment, the investor should seek to establish such less obvious connections. He should expand his field of vision in both latitude and longitude in order to understand these distant influences, as well as the extent of exponential growth. We are used to thinking linearly, and when we make inferences about the future we automatically drag the recent trends in the spreadsheets of our mental calculations. The arithmetic of exponential growth is treacherous even for specialists. In the 1980s, AT&T hired McKinsey to assess the possibilities of the mobile phone market. The renowned consultancy predicted that, by the year 2000, the number of mobile users would not exceed one million. It actually reached 100 million. The difficulty of seeing the power of compound growth over time resulted in a forecast that was off by 99% (Ismail 2014).

As we saw in the previous Report, network effects can be direct, when value increases for the user of the good (telephony, social networks), or indirect when the marginal user value increases for both the consumer and the producer of the good (software, operating systems, stock exchanges, marketplaces). Indirect network effects are actually central to multi-market platforms (Airbnb, Uber, Amazon), whose core business is to balance the value proposition for both sides of the network. In Uber's case, an excess of passengers would lead to price increases and/or decrease the quality of the service, inducing passengers to leave the platform. Too many drivers, on the other hand, would lead to falling prices and/or lead to underutilization of the fleet, encouraging drivers to look for other alternatives. The art in this business consists of calibrating and fine tuning the value perception on both sides of the platform. As in a stoichiometric relationship, there must be a proportional balancing between the two sides of the equation for the reaction to occur. Solving this coordination problem by simultaneously bringing together the two sets of agents, and in parallel achieving critical mass to catalyze the ignition that will lead to the organic growth of the platform, is the great challenge for entrepreneurs. In fact, as the network theory presented in the earlier Report suggests, evidence shows that in markets

where a platform becomes dominant, the leading platform enjoys significant market power.

A good example of this dynamic is the sales of Smartphone in US, where Apple went from 0% market share in 2007 to reach almost half of the market in 2015. Nokia, Samsung, Motorola, Sony Ericsson and LG held 90% of the market in 2007 and employed the strategy of classic competitive advantages: high product differentiation, reliable brands, state-of-the-art operating systems, excellent logistics, benign regulation, high R&D budgets, and massive scale. There was every reason to believe that they had achieved a stable, profitable and well-protected market position. Apple's biggest insight was not to "simply" offer a product with superior design and innovative qualities. It consisted mainly of transforming the cell phone from a conventional consumer product into a platform business tool. By connecting participants from both markets – users and third-party app developers – Apple was able to establish a virtuous dynamic of network effects. By 2015, the Apple Store offered 1.4 million apps, generating a cumulative revenue of $25 billion for developers.

Establishing network effects by itself does not guarantee definitive success. Value perception on both sides of the network needs to be present early on. Premature growth without adequate product quality can be fatal because it reduces the chance of reaching the tipping point that triggers exponential growth. In its beginnings, Ebay (the marketplace), for example, grew very fast through what were known as "power sellers". The site had to make concessions for these participants, such as providing them bulk listings, which at the end of the day made the buyer's experience in the platform inferior (Haigu and Rotman, 2016). Friendster was the first social network to gain popularity. Formally launched in March 2003, six months later it already had 1.5 million users. Despite having reached a critical mass early on, it was unable to solve subsequent problems and went into rapid decline. Some of the reasons highlighted in the autopsy were: insufficiency in technological infrastructure, which made users lose trust in the site; inability to solve new problems that were emerging, such as making profiles accessible by users outside of a person's friendships; excess of rules, limiting spontaneous user initiatives (Evans, 2009).

Between 1995 and 2001, more than 1,500 B2B sites emerged. In 2000, Goldman Sachs analysts predicted that B2B e-commerce would amount to about $4.5 trillion in 2005. After great initial euphoria, B2B never took off as expected because it failed to create enough value to attract users, relative to other forms of bilateral relations. The price element was the main determinant in auctions and sellers complained that they were not able to differentiate themselves through service quality. As sellers were slow to adopt, buyers began to lose interest, and B2B proved to be a fiasco.

Hence the importance of bringing 'influencers' at the beginning, that is, users who act as catalysts[1]. These users bring more value to the platform, stimulate a greater diffusion of the product, at the same time that they represent smaller acquisition costs (sales and marketing). Recruiting or even subsidizing these user-engagers from the outset often generates high direct and indirect externalities. Thus, the nature of the relationship between participants provides important insights into the organic functioning of networks. User profiles, affinities, capacity to aggregate connectors and network density end up establishing differentiated payoffs[2].

A fundamental feature of the architecture of platforms is that they have a fixed base on which modular components are arranged, developed and modified over time. From a core of stable restrictions, also called basic design rules, complementary elements are developed as articulated modules. This architecture gives platforms a desired combination of stability and variability. The mental model here is borrowed from biology, where a parallel is observed in multicellular organisms, whose great phenotype variety is obtained by means of the

1 *Once again, this agrees with the conclusions about the role played by hubs in scale-free network models, as we saw in the previous Report.*

2 *Under this view, the celebrated Metcalfe's Law, named after Robert M. Metcalfe, the inventor of Ethernet, has undergone a few changes. Metcalfe proposed that the value of a communication network would be proportional to the square of the number of users (n2). The alteration comes precisely from the observation that not all connections of a given network are used at the same intensity. Thus, the value of the network could be better described by a more 'conservative' formula, such as n*log(n) (Briscoe et al., 2016). Or even by the more informal equation of Scott Galloway, where the value of the network would be the product of the user base and the intensity of their "engagements".*

conservation of the central metabolic processes inside the cells. It is precisely the combination of stable central processes with complementary modular processes that allows the occurrence of valuable (non-lethal) variations in complex organisms (Kirschner and Gerhart, 1998). Such a structure produces a flexible and at the same time robust mechanism that sustains fundamental changes and variability for evolutionary adaptation. That is, the architecture of platforms, arranged in the model of central elements and versatile peripheral interfaces seems advantageous, because it allows the possibility of being new, without the need to develop the whole system from the beginning. The benefits of this arrangement are multiple: fixed cost savings, efficiency gains in product development through reuse of common parts, ability to create a large number of derivative products, and more flexibility in product design.

The articulated architecture of platforms provides a series of important developments in the business models and new competitive reality of companies:

i) Disruption is occurring without new companies having to pay out large R&D budgets. That is, software developers create their applications as "building blocks", based on the solid technology stacks of accumulated investments from the R&D giants. The phenomenon of democratization of creation enables the potential disruptor to come from anywhere (such as a group of college students – Facebook), or from unpretentious initiatives (such as developing a community service – Waze). The decentralization of innovation also explains the large number of mergers and acquisitions so typical of the technology industry. It is the way in which incumbents incorporate those innovations that seem promising or that have already been approved by consumers (Google – Double Click, You Tube, Android, Waze, Net Labs; Facebook – Instagram and WhatsApp; Microsoft - Skype, Mojang, Linkedin, etc.)[3].

ii) Subscription becomes the most appropriate revenue model, in the form of a recurring service, and the traditional license model, associated with the remuneration of high fixed development costs, becomes obsolete. Subscription allows for greater customer interaction, whether by spontaneously receiving feedback or by capturing data. This translates into more appropriate software updates, further enhancing the user experience.

iii) Since software is quite versatile and suitable for later modification, digital companies have high degrees of customization and experimentation. In this fluid environment, traditional five-year strategic plans lose their sense. Projecting the future from the recent past and inferring predictability from conceptual frameworks are increasingly turning into wishful thinking. Constant experimentation has become the best way to manage risks.

iv) In contrast to the traditional economy, where time invariably affects physical goods, depreciating them, the perception here is that the products are updated daily and improved, as if they acquired an unusual anti-aging property.

In the platform world, the dynamics are no longer those of scarcity and exclusivity, but of abundance and attraction. Value is no longer found in controlling an asset base, but in the aggregation of outside interactions. Growth and market expansion stem from the ability to reduce consumers' barriers to use/participation. If user attraction is the name of the game, the main challenge is to provide the best possible user experience. The logic is no longer of having a monopoly of supply, logistics, distribution channels, or advertising. The idea now is to try to reach hegemony through control of demand, by offering the best value proposition for the consumer.

Not surprisingly, the iconic companies in this environment do not only guide themselves, but also define themselves around the goal of offering the best possible user experience. Amazon "seeks to be Earth´s most customer-centric company". The first of its four principles is guided by "customer obsession rather than competitor focus". Apple presents itself as a company "committed to bringing the best user experience to its customers through its innovative hardware, software, peripherals, and services". Google and Facebook, in formulating their corporate purposes, replace the term customer with "people". Google would then be "a global technology

3 *In only 17 years, Google has made more than two hundred acquisitions.*

leader focused on improving the way people connect with information". Facebook's mission is "to give people the power to share and make the world more open and connected".

The radical change in orientation, in which user experience becomes the business' primary focus, illuminates some distinct and pertinent discussions, namely:

i) Will there be a future for managerial strategies and business models based on supply-side principles? That is, will companies that until now established their competitive advantages by optimizing their asset bases, controlling supply and distribution channels, and keeping costs and expenses below the competition, be able to survive? Will they be able to adapt their talents and guide their internal resources and efforts to develop the new skills required in this environment of consumer sovereignty?[4]

ii) It became commonplace for platforms to be classified as asset-light business, as long as technological innovation brought the possibility of distributing digital products and services without having to manufacture them. Indeed, numerous platforms, as we saw with Airbnb and Uber in the beginning of this Report, greatly impacted their respective competitors while acting only at the top of the value chain, connecting consumers without incurring in any manufacturing costs, or investing in fixed assets. By controlling the user interface, these companies have control of the brand, pricing ability, and achieve the highest added-value on the market. The interface layer is where value and profitability lie, that is, in the software and not in the product. This is not to say that these companies will always necessarily be asset-light. On the contrary, after reaching a certain size, they find themselves needing fixed assets as a strategy to continue to open routes to the market and expand in their customers' wallet shares. In this light, one can understand why Amazon buys airplanes and acquires a grocery retailer (Whole Foods), and why Netflix invests heavily in producing its own content. What matters at the end of the day is providing the best possible consumer experience.

iii) Supply-side economics is consistent with the traditional theory of disruption described by Clayton Christensen in his well-known book *The Innovator's Dilemma*. Basically, a new entrant finds a breach in a lower niche of an incumbent's unserved market, while the incumbent's focus and energy is naturally directed to the other more promising consumer segments. That is, disruption begins cunningly, in the outer edges of the market. In the digital environment, where the network effects prevail, after the most intense operational and financial efforts are expended in the development of the platform, new entrants are already in a position to address the most valuable consumers. Hence, since the beginnings, the strategy of these business models is already designed to offer a superior experience to future users, different from the traditional model, disruption starts from the top of the market with the high end consumer and works its way down. Uber, for example, began its activities offering higher quality services with Uber-Black.

iv) The combination of near zero production costs with the mentality of prioritizing the customer experience has brought the possibility of addressing more niches of demand. On Amazon, for example, a significant part of book sales are titles that do not appear on the 100 thousand best-sellers list, and more than half of

4 *In Dynamo Fund Report of June 2017, we considered this subject with more deepness, when we analyzed the impacts of internet and technology on the universe of FMGC (fast-moving consumer goods) companies.*

Dynamo Cougar x IBX x Ibovespa Performance up to November 2017 (in R$)

Period	Dynamo Cougar	IBX	Ibovespa
60 months	86.2%	35.2%	18.1%
36 months	64.5%	43.6%	43.9%
24 months	45.0%	57.7%	59.5%
12 months	22.9%	16.9%	16.3%
Year to date	22.7%	19.9%	19.5%

NAV/Share on Novenber 31 = R$ 751.0466257

Table 1

Traditional Paradigm	Digital Paradigm
Supply side economics	Demand side economics
Efficiency in production, economies of scale	Network effects, critical mass, tipping point
Asset ownership	Asset use
Command and control	Self-organization
Financing: (scarce) capital as a differential	Financing: capital is abundant (e.g. unicorns)
Leverage, third-party capital	Equity, retained earnings
Dividends, share repurchase	Reinvestment, growth
Linear growth	Exponential growth
Well-defined competitors	Competitor-partners ("frienemies"); potential competitors outside of segment/industry
Survival strategy: maintaining the status quo	Survival strategy: bring about radical changes, self-disrupt
Barriers: static, attempts to erect and sustain them	Barriers: dynamic, permanently being carved
Erect competitive barriers	Disrupt barriers to adoption/use
Destructive external forces, moats	External forces can be constructive, bridges
First-mover advantage	Later-learner advantage
Difficulty in dealing with change, "innovator's dilemma"	Innovation in DNA
Advancement of the technological frontier is capital intensive (high R&D expenses)	After infrastructure is in place, frontier advances by developing low-cost building blocks
Innovation process tends to be discrete, linear	Fast and continuous innovation
Digital transformation (big data, IoT): impacts on production, increased industrial productivity	Digital transformation: deepening network effects
Cloud example: reduce costs, improve processes	Cloud example: large impact on startups and venture capital
Costly customization and experimentation	Easy and inexpensive customization and experimentation
Less impactful second-order effects	Comprehensive second-order effects
Where there is network effect: switching costs tend to be high, e.g. operating systems	Low switching cost, e.g. decision to migrate between marketplaces
Monopoly over supply, distribution or infrastructure	Demand monopoly: offering better consumer experience
Disruption: classical, à la Christensen, bottom-up, from the edges of the market, outside incumbent's radars	Disruption: top-down, platform-ready, offers the best experience from the beginning, high-end market first
Organize supply, attract clients and convert transactions; optimize conversion to grow	Build network effects before optimizing conversions
Develop thinking about the client	Development requires attracting the two sides of the network, consumers and producers
Clearly defined product uses from start	Alternative uses of the product emerge
Direct pricing (monetization): value created by the business	Different pricing: customer acquisition cost < lifetime value; discover which side of the network generates value and charge it
Name of the game: find the customer for a given product	Name of the game: develop interactions around the product
Value generated is contained in the specifications and uses of the product	Value generated is in the ability to provide underlying infrastructure that allows for collective creation among platform participants
Information technology: from the back-office – ERP	Information technology: from the front-office – CRM
Finance: shareholder value from FCF generated by the asset base itself	Finance: value for the shareholder from interactions that happen outside the company
Innovation: in-house expert team	Innovation: crowdsourcing and contribution of ideas by independent participants and third parties
Strategy: control of internal resources and erect barriers to competitors	Strategy: orchestrate external resources and create vibrant communities
Marshallian environment of decreasing returns; forces of perfect competition lead to equilibrium	Increasing returns, positive feedbacks; environment where forces amplify differences, leading to instability
Products suffer continuous depreciation	Age reversing – products improve and are continuously updated

the titles sold are not usually found in physical stores (long tail).

The modern digital world has been transforming the behavior of individuals in all relationship dimensions: personal, familial, social and, of course, professional, with ramifications on companies' culture. There are several vectors that influence this change. The focus on the client makes companies turn outward, rather than inward. User experience shapes and guides internal activities. Information and knowledge start to travel on a two-way street between employees and customers. The network environment, by definition, is less hierarchical. The graphical representation of these networks are circles, where vertices (members) are pairs. Organization charts are more horizontal. When information flows in real time, the hierarchy collapses. The command-and-control structure is justified only in the presence of asymmetry of knowledge.

In networks, the logic of collaboration is prevalent. The outside world participates in the creation of value. The exchange is more natural. A sense of contribution is what guides relationships. Individuals orient themselves in a different way: the primary connection is with the network, with the community, and less so with the company. The talent turnover is greater, the longevity of relationships tends to diminish. As interests are more dispersed and volatile, the issue of alignments of interest becomes more challenging, and the design of incentives moves from being a science to being an art.

Trying to predict the direction of competition in traditional businesses is already an arduous task. Doing so in the digital environment becomes much more challenging. Throughout these last three Reports, we went over some reasons for this intrinsic unpredictability:

i) Due to their very nature, digital elements are reprogrammable, they admit multiple functions, they are transformed into homogeneous information, into immaterial binary numbers, and can be manipulated in many different ways;

ii) By the configuration of networks, product development and value creation are a participative process. The digital ecosystem allows numerous agents to develop and integrate new properties to products and services, making them acquire different features and applications from what was initially conceived;

iii) The reality of exponential growth and increasing returns has cumulative dynamics, which greatly amplifies the spectrum of future possibilities;

iv) By the speed with which new ventures can achieve critical mass, becoming relevant early on, bringing enormous instability and fluidity to the competitive landscape.

Hence the enormous difficulty for those intending to make inferences about the future trajectory of digital technologies. And what can be said about the fate of

Table 1 (continue) - Cultural aspects

Traditional Paradigm	Digital Paradigm
Corporate structure: corporations	Corporate structure: dual shares, founding partners hold special rights
Competition, command and control, extrinsic motivation, centralization	Collaboration, trust, self-organization, intrinsic motivation
Organization chart, hierarchy, headers	Flat organizational structure, circular representation, decentralization
Hiring: talents and experience	Hiring: values and adaptability
Companies turned inwards	Companies turned outwards
Employee spirit	External partner ecosystem
Hierarchy, planning, control, production-oriented, optimization (keep production flowing at low costs and try to improve product quality)	Flat structure, mission-oriented, continuous adaptation (seek the next great insight); reinventing purposes, goals and ways of doing things
Rise of an internal organization, of a managerial authority, necessary to coordinate the great industrial enterprise (visible hand, Alfred Chandler)	Technological changes allowed for de-centralization and specialization, making managerial control less necessary (evanescent hand, Richard Langlois)

DYNAMO COUGAR x IBOVESPA
(Performance – Percentage Change in US$ dollars)

Period	DYNAMO COUGAR* Year	DYNAMO COUGAR* Since Sep 1, 1993	IBOVESPA** Year	IBOVESPA** Since Sep 1, 1993
1993	38.8%	38.8%	7.7%	7.7%
1994	245.6%	379.5%	62.6%	75.1%
1995	-3.6%	362.2%	-14.0%	50.5%
1996	53.6%	609.8%	53.2%	130.6%
1997	-6.2%	565.5%	34.7%	210.6%
1998	-19.1%	438.1%	-38.5%	91.0%
1999	104.6%	1,001.2%	70.2%	224.9%
2000	3.0%	1,034.5%	-18.3%	165.4%
2001	-6.4%	962.4%	-25.0%	99.0%
2002	-7.9%	878.9%	-45.5%	8.5%
2003	93.9%	1,798.5%	141.3%	161.8%
2004	64.4%	3,020.2%	28.2%	235.7%
2005	41.2%	4,305.5%	44.8%	386.1%
2006	49.8%	6,498.3%	45.5%	607.5%
2007	59.7%	10,436.6%	73.4%	1,126.8%
2008	-47.1%	5,470.1%	-55.4%	446.5%
2009	143.7%	13,472.6%	145.2%	1,239.9%
2010	28.1%	17,282.0%	5.6%	1,331.8%
2011	-4.4%	16,514.5%	-27.3%	929.1%
2012	14.0%	18,844.6%	-1.4%	914.5%
2013	-7.3%	17,456.8%	-26.3%	647.9%
2014	-6.0%	16,401.5%	-14.4%	540.4%
2015	-23.3%	12,560.8%	-41.0%	277.6%
2016	42.4%	17,926.4%	66.5%	528.6%

2017	DYNAMO COUGAR* Month	DYNAMO COUGAR* Year	IBOVESPA** Month	IBOVESPA** Year
JAN	10.2%	10.2%	11.9%	11.9%
FEV	3.9%	14.5%	4.0%	16.4%
MAR	-2.1%	12.0%	-4.6%	11.0%
ABR	1.0%	13.2%	-0.3%	10.7%
MAI	-1.3%	11.8%	-5.5%	4.6%
JUN	-1.3%	10.3%	-1.7%	2.9%
JUL	9.3%	20.5%	10.7%	13.9%
AGO	3.5%	24.7%	6.9%	21.8%
SET	3.2%	28.7%	4.2%	26.9%
OUT	-5.4%	21.8%	-3.3%	22.7%
NOV	0.7%	22.6%	-2.7%	19.4%

Average Net Asset Value for Dynamo Cougar (Last 12 months): R$ 2,935,522,360

(*) The Dynamo Cougar Fund figures are audited by Price Waterhouse and Coopers and returns net of all costs and fees, except for Adjustment of Performance Fee, if due. (**) Ibovespa closing.

technology companies? An uncertain environment that requires increased diligence for value investors.

Platform companies illustrate what is most dynamic about the corporate environment. We schematically synthesize in Table 1 the main differences between the two paradigms: the business model of the traditional economy and the reality of platform companies. The speed with which they establish themselves, connect disperse interests, and capture value of an entire chain is unprecedented, and illustrates the extreme threat to those who ignore this new reality. As investors in a portfolio of companies in the "traditional" economy, and as investors concerned primarily with capital protection, we decided to begin our investigation in what is most disruptive. Hence the structure of this first trilogy of Reports.

We hope our patient readers have taken some benefits out of these reflections. For us the effort has definitely not been in vain. The lessons are diverse and unfold in new purposes and work fronts. We are incorporating new tools and mental models, expanding our network of relationships in new directions, widening the peripheral vision of our analytical lenses to incorporate new latitudes, and challenging the executives of invested companies, pointing out new potential problems to be thought about. Wherever the fundamentals of companies' intrinsic value go, that is where we must go.

Rio de Janeiro, December 27, 2017.

Please visit our website if you would like to compare the performance of Dynamo funds to other indices:

www.dynamo.com.br

DYNAMO

DYNAMO ADMINISTRAÇÃO DE RECURSOS LTDA.

Av. Ataulfo de Paiva, 1235 / 6° andar. Leblon. 22440-034. Rio. RJ. Brazil. Phone: (55 21) 2512-9394. Fax: (55 21) 2512-5720