Report
DYNAMO 73
1/4 2012

Physiology of Impatience

Short-termism already became a common word for expressing a certain pattern of decisions that favor actions/initiatives which have the objective of creating short term results, even if they compromise long term success. The thematic of short-termism is multidisciplinary and echoes in different aspects of modern life. Examples include: on debates about ecological and wildlife issues, when addressing the dilemmas of the use of Earth´s physical resources between generations; on the shortening of the time frame of political agendas, being adapted to election cycles; on the corporate world, where issues of sustainability and externality reduction clash with the imperative of profit maximizing every quarter; on people, with the eternal trade-offs between health/addiction, sacrifice/pleasure, saving/spending, magnified by the reality of a longer life expectancy.

It is well known that financial markets are a useful thermometer to analyze decision patterns over time. As a custodian of personal savings and a provider of resources for long term investments, it acts as "a key conduit for choice over time" (Haldane 2011)[1], reflecting current and future anxieties of society, and, at the end of the day, confidence levels and apprehensiveness with the future.

Therefore, it is natural for one to conclude that short-termism is also present in financial markets. Indeed, it is ubiquitous the feeling between experienced investors that a short term mentality guides decisions and the behavior of capital markets. We propose to analyze this subject in two Reports. On this one, we will search for empirical evidences for the short-termism thesis, as well as enlighten the reasons for why that time frame thrives among market participants. On the next one, we will enumerate the problems and costs of short-termism, which, by the way, justifies the analysis of this theme, and then we will list some initiatives trying to reinstate a longer time frame among market participants. Lastly, we will discuss practical implications of the theme for us at Dynamo, as a long term investor.

Evidences (?)

To start off, a curious fact: despite its relevance and the perception that markets are increasingly more short term driven, there's a clear gap of academic studies that address the issue with empirical testing. Maybe this is because of the huge difficulty of precisely modeling the short-termism hypothesis. The "discounted utility" hypothesis, the main tool used by economists to address the subject, has been demonstrated to be insufficient to capture the plasticity of our decisions over time, as that varies between different individuals and even between time frames of the same individual. It can also be because of the counterfactual nature of this theme, as a short term strategy, which destroys value over the long run, by definition, eliminates the possibility of its own verification. Or maybe the lack of studies is because of the number of different players that the market comprises, as short term behavior can be attributed to money managers, corporate managers, analysts, among others. As these players frequently interact, the control of the 'variables' in the 'experiment' is compromised[2].

1 *As usual, complete bibliographical references are available on our website:* http://www.dynamo.com.br/narbibliog.asp

2 *The short-termism concept, as discussed in these two Reports, is associated with strategies whose focus on the short term produces some kind of adverse consequence in the future. It is imparted with a tradeoff notion when it comes to decisions that favor the present,* **in detriment** *to the future. It must not be mistaken for a tactical urgency for immediate results, which is a healthy disposition in as much as it stimulates efficiency and rejects traits such as accommodation and passiveness, usually fatal in a competitive environment.*

As for the corporate world, the vast majority of empirical studies use R&D (Research and Development) spending as a proxy for the long term commitment (or lack thereof) of companies. That said, when R&D spending is reduced, this could be a sign that executives are sacrificing the long term sustainability of the business in order to present better short term results (Dechow and Sloan 1991, Baber et al 1991, Bushee 1998). Although this can be true, R&D levels can vary because of factors other than a simple trade off of value creation over time. Besides being different from one industry to the next, it will also fluctuate because of the technological cycle of a particular sector. Furthermore, there are other elements that are equally important in assessing a company's long term health, some of which can be sacrificed without fanfare in the short term, given their qualitative nature, such as management talent or the company's reputation. In other words, R&D spending alone may not be an adequate or definite indicator to test the hypothesis of short-termism in the corporate world.

An alternative approach of empirical research is to track evidence that companies "manage" their short term results and avoid reporting losses. This would happen not only through accounting artifices, but also by the manipulation of the company's operations, such as: increasing sales, changing delivery schedules, reducing discretionary expenses such as delaying maintenance costs, increasing stock buybacks in order to keep share prices up (Bens et al. 2002 and 2003), selling assets to minimize the impact of losses (Bartov 1993). The list goes on and is as long as the creativity of company executives.

Despite these efforts, mostly restricted to corporate decision frames, there is no definitive piece of research that rigorously illustrates the short-termism hypothesis in capital markets. Even recent attempts, authored by quality scholars (Haldane, 2011) cannot be considered definitive. In that case, even though Haldane concluded that "short-termism is both statistically and economically significant in the capital markets", he assumed that the investor's preferences would be stable over time. In other words, this means that investors require the same annual interest rate throughout the life of their savings, a controversial assumption (cfr. Booth 2011).

Thus, we will continue to sustain the argument that capital markets are short term driven, this time though without the convenient backing of empirical analysis. This is a necessary disclaimer since, whenever possible, we always try to present in our Reports controversial arguments illustrated by high quality empirical research. Not due to a rhetoric pretension, much to the contrary. We do it because of the recognition that when dealing with such complex topics, such as the ones that we face day-in day-out with the stock markets, requires having this kind of evidence in order to test our intuition and draw conclusions exempt from methodological or psychologically originated flaws: it is our daily routine of self awareness.

With all the setbacks of trying to model and test our hypothesis, the most quoted empirical study about the subject was conducted as a query/interview. Published in 2006 (Graham, Harvey and Rajgopal), the survey was submitted to 401 finance executives of American companies and presented surprising results. The executives admitted to having a predisposition to perform actions that compromise long term value creation for shareholders in order to fulfill the market's profit expectations. For example, 80% of the participants admitted to being open to the idea of reducing discretionary expenses (R&D, marketing, maintenance) in order to achieve profit goals, while recognizing that this decision will destroy value over time. Likewise, more than half of the CFOs said that that they would delay or even decline projects with a positive NPV (Net Present Value) so that the profit goals are not frustrated. Almost all of the respondents (97%) admitted that they preferred to show "smoothed" quarterly results. They claim that not presenting the expected quarterly results and/or having volatile profits must be avoided because they generate a perception of business uncertainty among investors.

From the executives' responses, it is clear that they blame the capital markets for their short term actions. As they are pressured to show quarterly results, executives feel compelled to attend to the immediate-driven demands of the financial community. On the other hand, in specialized forums that discuss the effects of this behavior, the diagnosis is more open-ended. The most cited of them says: "Short-termism is not limited to the behavior of a few investors or intermediaries; it is system-wide,

with contributions by and interdependency among corporate managers, boards, investment advisers, providers of capital, and government"[3] [4].

Indeed, if there is a lack of evidence from the formal models, we have no trouble in finding data that suggests a greater prevalence and pressure for short term results between market participants.

- The annual turnover of publicly traded shares in the NYSE (New York Stock Exchange) went from a range of 10% to 30% in the years 1940-1980 to 100% in 2005 (Montier, 2007), a remarkable increase, even when considering the recent presence of quantitative "high frequency" strategies.
- The average holding period of investors in American mutual funds went from 10 years in 1950 to less than 4 years in the beginning of this century (Bogle, 2005).
- A study conducted by Booz & Company among the 2,500 largest public companies worldwide verified that in the years of 2000s, on average, 3.6% of the surveyed CEOs were fired (due to weak performance), compared to 1.1% to 2% in the 1990s (cfr. Karlsson, 2008).

Reasons

As a potential hindrance to future performance, what would be the explanation for this feature to be so common among capital market players? We classify the reasons in three groups.

Incentives. First off, the incentives. Money managers, for instance, are constantly being pressured by investors to produce short term results. Three months underperforming the benchmark is sufficient to trigger a series of withdrawals from a fund. In this impatient ambiance, managers become much more risk averse and, as a survival reflex, begin to reject strategies which results would only become visible in a longer term.

It wasn't always like that. In the beginning of the last century in the United States, managing money was an activity mainly based on stewardship. On the one hand, a trust deposit, on the other, the fiduciary loyalty based on professional reputation. Gradually, this relation evolved into a business, a simple commercial transaction. As such, if the product (performance) isn't delivered, the buyer (investor) changes (withdraws his money) the supplier (manager). Hence it is the dissolution of the trust-based relationship that has brought impatience to this industry.

Long term survival in the money managing business demands short term results, especially in the early stages of the fund. However, short-termism is so widespread that even some of the most established managers, with several years of track record, can experience some instability in their funding after a few bad quarterly results. This pressure exists even among institutional investors, those who by definition should pursue longer term strategies. Again, this could be due to the manager's perception of career risk. "Worldly wisdom teaches us that it is better for reputation to fail conventionally than to succeed unconventionally" (Keynes, 1936).

The corporate world also seems to have its compass tilted to short term results. As discussed above, the survey among American executives indicates a strong predisposition to pursue short term guidance so that their companies do not fail to meet market expectations, even if it is in lieu of long term performance. Moreover, many management compensation packages are based on current-year operational results like annual sales levels and margins, and stock options frequently have inadequate time frames. Lastly, there is a concern about the managers' career. Executives have to deliver short term results, and they are accounted for relative performance among their peers. "As long as the music is playing, you have to get up and dance", said Citigroup's former CEO. In fact, as we saw above, the trend of an increase in executive turnover seems to be universal.

Between brokers, advisors and other service providers, the incentives also contribute to a short

3 *The Aspen Institute Business & Society Program (Sep, 2009) Overcoming Short-termism: A call for a more Responsible Approach to Investment and Business Management. The work is authored by John Bogle, Warren Buffett, Louis Gerstner, Martin Lipton, John Whitehead, among others.*

4 *A country's tax structure can reveal the way the government decides to participate in the business cycle. In Brazil, with top line sales taxes, the government appears as an impatient collector, avid to guarantee its share of the pie prior to other stakeholders, not even waiting to see if the business will be successful or not.*

term orientation. This is due to the fact that those intermediary agents are paid on a per transaction basis. Hence, the more buying and selling activity, the better for those players.

Biology. Physiological, neurological and psychological ingredients that influence investors' decision making process also help explain the market's short term bias.

We are mammals with an evolved prefrontal cortex. Our spectrum of behaviors involves not only animal emotions and instincts, but also human capabilities of prediction and deliberation. We can find ourselves under the influence of automatic processes, susceptible to impulses or temptations, but we are also equipped with alternative processes that block these primary reflexes. Our decision making capacity oscillates between a heuristic system that produces fast, intuitive responses and a reflexive one that controls, monitors and sometimes corrects the first reaction[5].

Recent advances in brain imaging provided us with new dimensions to comprehend neural mechanisms that are subjacent to the individual's decision making. When submitted to choices involving immediate payoffs, functional MRI scans show an activation of the limbic system, usually associated to emotional rewards. That system is also connected to brain parts that release dopamine, the substance responsible for making us feel well, confident and stimulated. In other words, a short term investment decision, with an immediate expected return, should be mainly processed by our impatient, impulsive, automatic and intuitive system. No wonder the good traders are intuitive people, who claim to have a talent to "feel" the market.

In a long term investment, the premium is postponed. This kind of decision, which involves patience and requires an evaluation of the trade-off towards an alternative with a longer term reward, is processed by the other system, more rational and deliberative. We don't intend, in this particular moment, to give our opinion about the acuity of each system or about the superiority of long term financial decisions. The point here is to remember that financial markets offer us a variety of short term choices and that we are submitted to psychological mechanisms that stimulate us, in an automatic way, to pursue immediate rewards. Hence the abundance of day-traders and players with very short term strategies on the financial markets. Similarly, this biological component helps us explain the lack of investors with a long term perspective. Waiting for the better payoffs of future rewards requires discipline and practice in order to resist genetically rooted instincts and impulses[6].

It is our nature not only to pursue fast results but also to keep tabs every step of the way. Individuals like to track the progress of the outcomes of their decisions in the shortest time possible. The possibility of constantly verifying a monetary reward makes us feel well. Again capital markets act in a way that stimulates and reinforces our natural inclinations since the partial results of our financial decisions are available to be constantly checked (and recalibrated) and at a low cost.

Nowadays, it is widely known that stressful situations generate short term responses, shutting off long term mechanisms. No sane person would dare trying to deny that the capital markets are a fertile environment to experience stressful situations on a daily basis. This is another biological connection that links capital markets to short term decisions.

Numerous psychological ingredients also conspire to reinforce the tyranny of short-termism activity. Excess confidence, for instance, is one of the most common traits. Confident in their abilities to analyze and trade, investors change their allocations more frequently. They credit themselves with being able to read the short term movements

5 *Studies on the interface between those two systems and their influence on human behavior date back to the 19th century and have received different names: in psychology, the "affective-cognitive" model (James 1981 [1890]) or "Hot and cold" (MetCalfe and Mischel 1999). Among economists, Adam Smith (1758) already talked about the dilemmas of "passions-impartial spectator". Recently dual self models have emerged, involving the "doer-planner" (Thaler and Shefrin 1981) and of the "elephant-rider" (James III 2011), for instance. Or, simply, systems "1 and 2" (Sanfey et al 2006) also popularized in the latest book by Daniel Kanheman (2011), well known for his experiments on decision making under uncertainty.*

6 *Research also shows that serotonin, another neuro-transmitter, would stimulate our preference for long term rewards. Should we observe higher levels of serotonin in long term investors?*

of markets and assets. Why wait for the long term when they can slice their time frame, achieving better results along the way?

Similarly, the confirmation and availability biases connected to the "illusion of control" and "illusion of knowledge", push investors to short term mind-sets. Individuals are used to search for data that supports their decisions and opinions. This disposition is fueled by a more frequent and a wider availability of short term information. Studies about intertemporal decision processes show that one of the most prevalent empirical result is the so-called hyperbolic discount. In other words, it is the fact that individuals attribute a greater importance to short term events, being less sensible to future outcomes. We attribute a higher value to vivid experiences and to the most recent trends.

Sociology: A third category of elements that explain the short term bias comes from the "environment" motivations. The contemporary world is characterized by an acceleration of the rate of change. Life cycles are shorter everywhere: markets, companies, jobs and products. On the corporate universe, technological advances diminish transaction costs. Innovations continuously test businesses' barriers to entry. Information travels on the fast lane and knowledge is quickly available. The "duration" of competitive advantages has been diminishing. The incumbent's life has become more challenging. A more integrated world reduces distances and augments competition. The pressure to deliver short term results is everywhere.

In the digital communication era, we are bombarded each moment by new information from a wide array of subjects and different geographical locations. The constant blinking of our screens works as a permanent invitation to review our decisions and recalibrate our positions.

We have access, nowadays, to a wide array of alternatives and to the possibility of changing our minds. With that, the duration pattern of our choices has been falling vertiginously. We are living in a "liquid modernity" (Bauman 2000) and this "liquidity unlocks the impatient gene" (Haldane 2010), in the sense that it offers us the opportunity that we seek to correct the course of our actions, instead of waiting for the future outcomes of decisions that have been taken beforehand. This brings us a feeling of enhanced control and, in financial decisions, a (false) perception of lower risk.

In the busy and accelerated day to day life, the feeling is that time is short. And time is the substratum for the functioning of our deliberative system. Lacking time, we become hostages of automatic processes, fast decisions and focusing on short term results. Entangled in the "here and now", contemporary people reduce their sight span, becoming even more myopic.

Having identified the explanations for the predominance of immediate-driven behavior between investors and other players of the capital markets, we are ready to move to the next Report in which we will list the problems/costs associated to this decision pattern as well as some suggestions that try to inhibit them. We will finish by checking the practical effects of the short-termism disposition on our long-term investment strategy, as we believe that having a strategy that generates value over long periods of time is an important competitive advantage.

Rio de Janeiro, June 29th, 2012

DYNAMO COUGAR x IBX x IBOVESPA
Performance up to May/2012 (in R$)

Period	Dynamo Cougar	IBX	Ibovespa
60 months	96,0%	16,8%	4,3%
36 months	100,3%	13,2%	2,4%
24 months	42,7%	-1,8%	-13,6%
12 months	12,6%	-6,8%	-15,9%
Year to date	8,5%	-0,3%	-4,0%

NAV/Share on May 31st = R$ 352,140102822

DYNAMO COUGAR x FGV-100 x IBOVESPA
(Performance – Percentage Change in US$ dollars)

Period	DYNAMO COUGAR*		FGV-100**		IBOVESPA***	
	Year	Since 01/09/93	Year	Since 01/09/93	Year	Since 01/09/93
1993	38,8%	38,8%	9,1%	9,1%	11,1%	11,1%
1994	245,6%	379,5%	165,3%	189,3%	58,6%	76,2%
1995	-3,6%	362,2%	-35,1%	87,9%	-13,5%	52,5%
1996	53,6%	609,8%	6,6%	100,3%	53,2%	133,6%
1997	-6,2%	565,5%	-4,1%	92,0%	34,4%	213,8%
1998	-19,1%	438,1%	-31,5%	31,5%	-38,4%	93,3%
1999	104,6%	1.001,2%	116,5%	184,7%	69,5%	227,6%
2000	3,0%	1.034,5%	-2,6%	177,2%	-18,1%	168,3%
2001	-6,4%	962,4%	-8,8%	152,7%	-24,0%	104,0%
2002	-7,9%	878,9%	-24,2%	91,7%	-46,0%	10,1%
2003	93,9%	1.798,5%	145,2%	369,9%	141,0%	165,4%
2004	64,4%	3.020,2%	45,0%	581,2%	28,2%	240,2%
2005	41,2%	4.305,5%	30,8%	790,7%	44,1%	390,2%
2006	49,8%	6.498,3%	43,2%	1.175,8%	46,4%	617,7%
2007	59,7%	10.436,6%	68,4%	2.048,7%	73,4%	1.144,6%
2008	-47,1%	5.470,1%	-50,1%	973,3%	-55,5%	453,7%
2009	143,7%	13.472,6%	151,9%	2.603,3%	144,0%	1.250,7%
2010	28,1%	17.282,0%	15,2%	3.013,2%	6,2%	1.334,5%
2011	-4,4%	16.514,5%	-20,6%	2.373,0%	-27,4%	941,7%

2012	Year	Since 01/09/93	Year	Since 01/09/93	Year	Since 01/09/93
JAN	12,0%	12,0%	15,5%	15,5%	19,9%	19,9%
FEV	8,6%	21,6%	7,1%	23,7%	6,2%	27,3%
MAR	-5,9%	15,1%	-4,0%	18,8%	-8,1%	17,0%
ABR	-3,5%	11,0%	-2,3%	16,0%	-7,7%	8,0%
MAI	-9,4%	0,6%	-18,2%	-5,1%	-17,5%	-10,9%

Average Net Asset Value for Dynamo Cougar (Last 12 months): R$ 1.643.993.385,00

(*) 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.
(**) Index that includes 100 companies, but excludes banks and state-owned companies. (***) Ibovespa closing.

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www.dynamo.com.br

DYNAMO

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