LONG-TERM INVESTING: AN OPTIMAL STRATEGY IN SHORT-TERM ORIENTED MARKETS

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Paper Presentation IV

LOYALTY SHARES: HOW TO REWARD LONG-TERM INVESTORS*

(Bolton & Samama, 2012)

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PATRICK BOLTON: Frédéric and I will be sharing this presentation. I'm going to do the first half and he's going to present in the second half.

We thought it might be good to start with some quotes that we have in our paper. First we have Benjamin Graham's comment about the Wall Street Rule, which is if you don't like the management sell your stock. Graham added an important caveat. Sell only if you can get a fair price, and if not, address the situation. Michael Lewis gives the best account of what is in the mind of the short-term oriented investor, through his comment about his own psychology when he invested in dot.com stocks.

Wall Street Rule:

"If you don't like the management sell your stock…provided you can get a fair price. If you can't, do something about the situation."

—*Benjamin Graham, 1954*

"[I] figured that even if Exodus Communications didn't wind up being a big success, enough people would believe in the thing to drive the stock price even higher and allow [him] to get out with a quick profit."

—*Michael Lewis, 2002*

We have heard many accounts of the short-termism today, and most of us share the concern that markets

* *Remarks have been edited for clarity.*

"[P]olicy makers ought to be considering structural changes that would enhance the role of investors and diminish the role of speculators."
—*John C. Bogle, 2010*

"Today, institutional investors, including public and private pension and retirement funds, mutual funds, and hedge funds control nearly 70%. Those institutional investors are managed by persons or firms whose compensation depends on generating short-term returns from the portfolio company shares under fund management. Those arrangements motivate these institutional investors to exert significant pressure on corporate managements and boards to deploy corporate assets and develop business strategies that will yield short-term profits, often at the expense of the long-term."
—*Jack B. Jacobs, 2011*

"[I]t is jejune to demand that CEOs and boards manage for the long term when the stockholders who can replace them buy and sell based on short-term stock price movements, rather than the long-term prospects of firms. It is contradictory to demand managerial responsiveness to stockholders sentiment, and then criticize managers for failing to resist stockholder demands for riskier business strategies and more highly levered balance sheets."
—*Leo E. Strine, Jr., 2010*

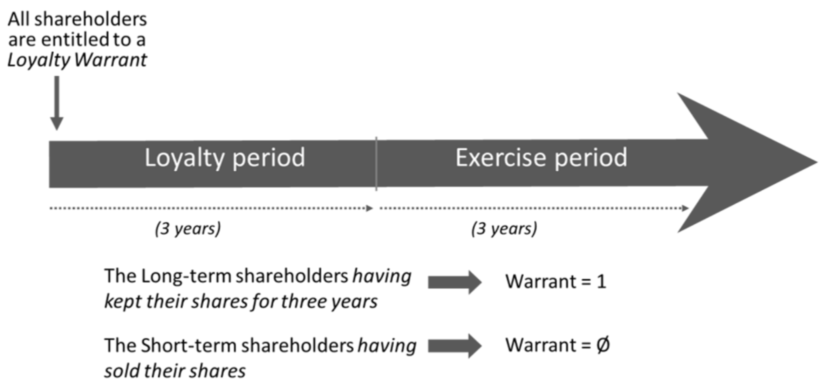
can go through short-term episodes that can be highly destructive. John Bogle, in this quote, urges a solution to this problem by trying to enhance the role of investors over speculators. This is really the agenda of our paper. Before I get there, I have one last quote that points to another argument we make. Chancellor Leo Strine emphasizes that short-termism is not so much management behaving in a short-term way in response to a rational market; rather, the market itself is short-term and puts pressure on management to behave in a short-term way.

There is very imperfect evidence on the increased short-term orientation of markets in terms of average holding periods, but the trend is suggested. Not just in the U.S., but pretty much around the world, you see the shortening of average holding periods. It is all the more striking that we have seen the opposite trend in institutional ownership, which is increasing over this period. It is also remarkable that short-termism is not driven by high frequency trading. This began before the high frequency traders appeared.

Before we get into the meat of our paper, we have one last quote. Leo Strine has said that "although the challenge of addressing the misalignment between the interest of end-user investors and society in the long run and the incentives of the institutional investor community to think and act myopically is considerable, it is past time to begin" (2010). This is what we are trying to do in this paper. We are coming up with a possible solution that could be introduced. It may not be the best solution, but it is a start. Let's see where it goes and open the debate about what to do about short-termist pressures in stock markets.

L-Shares: A Solution to Reward Long-Term Investors

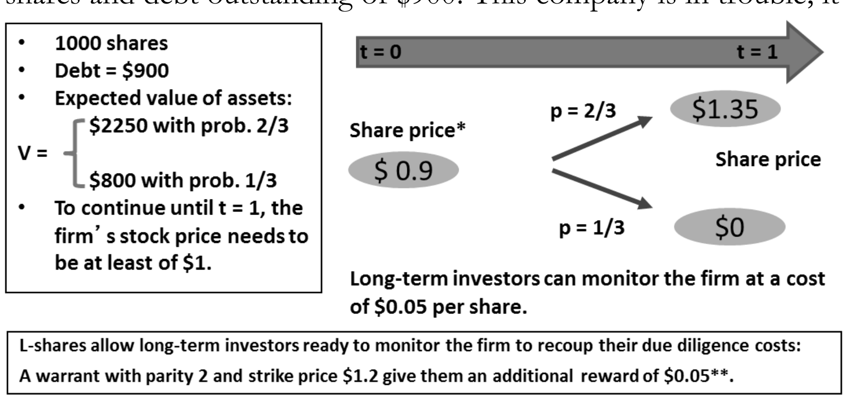
Our idea is loyalty shares, which grant a loyalty warrant to every shareholder that you have today. You tell the shareholders that if they hold stock during a loyalty period, let's say three years, then a loyalty warrant will vest. They will then have another three-



year period to choose to exercise. Shareholders are rewarded for holding stock for a certain amount of time. Here the example period is three years, but it could be shorter or it could be longer. In our example, the reward is in the form of a warrant. This is just one idea of a reward. We think it has some attractive features, but it does not have to be a warrant. The important idea is that you want to reward buy-and-hold investors for holding the stock, in order to set up a loyal shareholder base. You want to change shareholders' orientation, so they think about what is going to happen to the stock three years from now, rather than tomorrow or the day after tomorrow. If you hold the stock and sell it within the three year period, you don't get the warrant; it's as simple as that.

What is this useful for? A simple first point is that when you have shareholders engaging with management and thinking about a sustainable investment for the long-run, the results are not going to show up immediately. It is a process that takes time, and the results take time to come out. Loyalty shares help you discriminate between those shareholders that are willing to engage with management, perhaps by sinking some due diligence costs and finding out what the company is worth, and those who are not. As you know, if you are a blockholder in a company, and you do due diligence and pressure management to run the company to maximize the value of the firm, it is a public good. Everyone else sitting on the side benefits, although they are not paying for the cost. Because it is a public good, you have a provision problem that comes from that fact that we are not able to reward the providers of the public good. Loyalty shares help just a little bit in that direction by providing a little reward.

Here is an example from the paper showing how it might work. Think of a company with 1,000 shares and debt outstanding of $900. This company is in trouble; it is financially distressed. There is a 2/3 probability that it will survive and will generate value, in this example, of $2250. There is a 1/3 probability that the value will drop to $800, and the



* Share price at t=0: P_0= {(2/3)*Min[0;2250-900]+(1/3)*Min[0;800-900]}/1000=$0.9

** Ex ante value of the Warrant: W_0 = (1/2)*(2/3)*(1.35-1.2)=$0.05.

company will be insolvent. In terms of share price, the expected price is $0.90, which is too little for the company to survive; you need at least $1.00 per share for the company to be able to survive.

Here is where the long-term investors come in. They can do due diligence, which in this example costs them $0.05 per share, and that will allow them to find out whether the value is high or low. With a 2/3 probability, they will find out the value is high, but once that information gets out the share price rises to $1.35. Now the problem is that the minute people notice, and buying starts in the market, the price jumps to $1.35. The long-term investors, as a result, do not get compensated for their due diligence. They pay the cost, but do not get the reward. This is where loyalty shares can help, because they will give a disproportionate reward if investors hold onto the stock long enough. In this example, the loyalty warrant is structured so that it exactly compensates for the due diligence cost. This reward can only be obtained by the long-run investors, and short-run investors cannot appropriate it. If the stock price goes up to $1.35, the short-run investors will not want to hold that stock; they will get out at $1.30, and that allows the long-term investors to recoup their due diligence cost.

Uses of L-Shares

FRÉDÉRIC SAMAMA: The question is, when can a company use such loyalty shares? We see that there are four situations. The first, as we said before, is to reward costly monitoring. When an investor monitors a company, it brings value to the company and pays for it over the long-run. The cost is for the investor, but the gains are shared among all the shareholders after a certain period of time. By offering a financial reward only to the long-term investor, you reward them for that work they do with the company in the form of costly monitoring.

The second situation is to postpone a costly dividend. A company that is in trouble may want to keep its earnings. At the same time, it does not want to be sanctioned by the market for not delivering anything to the investors. Instead of having a dividend, the company can issue a fidelity warrant. That is exactly what Michelin did in 1991. Michelin was on the verge of collapsing and said they would not pay a dividend. Instead, they offered an additional fidelity warrant and ensured they communicated with investors. Even though the strike price was originally out of the money, when shareholders were able to exercise the warrant, they made a good gain.

The third situation is to secure strategic investors. A company that is in trouble wants new investors to buy its equities and has to offer some additional incentives. What they can do is offer a fidelity warrant. In a sense, this is exactly what happened with Warren Buffet and his investment in Goldman Sachs shares, or what the U.S. government did with U.S. banks. In both situations these people asked for warrants in order to leverage their investments in these troubled companies. With a fidelity mechanism, the company says, fine, you the investor will get this additional financial reward, but only if you play the role that you are supposed to play, meaning to be a patient investor. Goldman Sachs was not waiting for Warren Buffet to sell back the shares a few hours after purchasing them; and the U.S. banks were not waiting for the U.S. government to sell back the shares they had. Here, we are materializing the fact that these companies are expecting some fidelity, by having a mechanism that disappears if long-term investors do not play the role they are supposed to play.

The last situation is an initial public offering (IPO). When a company does an IPO, the real challenge that it faces is flipping investors, who buy the shares at the IPO for the little discount and sell them back in the market a few hours after the trading starts. If the package offered to the investors includes shares with fidelity warrants, then you tend to reduce the fraction of short-term players, in favor of long-term players. The warrant will be priced within the package, but it will only benefit the long-term investors. In a nutshell, we see that these fidelity warrant and loyalty shares can cover many different situations for a company.

Application of L-Shares

I'll give a concrete example. Let's take a maturity of six years, with a loyalty period of three years, during which you must hold your shares. After this period, you can exercise your warrant for three additional years. There is also a parity of ten to one and classic market parameters. You then have a price of $2.00 for the long-term investors who will get the warrants. If you have a capital structure of 10-90-10—meaning that 90% are short-term players; 10% are long-term players; and the value of the warrant is $2.00 since only 10% of the shareholders will benefit from it. The real cost to the company is only $0.20, because they issued something that will be real for only 10% of the shareholders. There is only a loss of 10%, making it $0.20. If we have a stock price of $100, after the warrant is announced the share price should drop from the theoretical value of the warrant, the $0.20, which is the real cost of the company. In a certain sense all shareholders, both long-term and short-term, will suffer a first loss of $0.20, because that is the value of what is distributed. But the beauty of the product is that this cost, which is shared among all the shareholders, is now transferred into the hands of the long-term players who have received the warrants. In a certain sense it is a transfer of wealth from the short-term to long-term investors. This is based on the fact that long-

Terms of L-Shares

Maturity:	6 Years
Loyalty Period:	3 years
Strike:	At the Money
Parity:	10 for 1
Volatility:	24%
Div Yield:	2.0%
Interest rate:	2.0%
Price of the share:	$100
Price (for LT shareholder):	$2*
Price (for ST shareholder):	$0
Value for firm:	$0.20

** With a $20 theoretical value for the call option*

Capital Structure

ST Shareholders:	90%
LT Shareholders:	10%

term investors are bringing additional value to the company, compared with the short-term players.

Now if we keep the same example, but we have a company that has a market capitalization $50 billion, other conditions unchanged, we see that for the next six years we have an annual growth of, for example, 10%. Then 10% of long-term investors will benefit from additional gains on the warrants in the amount of about $386 million. We see the beauty of the leverage effect. Even when you have a very minimum value up front and even with a very limited earning pressure impact, if the share price goes up, you will have very significant additional gains related to the warrants.

Market Capitalization: $50 bn
Limited EPS Impact (<1%)

Annual growth (%)	**5%**	**10%**	**15%**	**20%**
Share price ($)	134	177	231	299
Capital Gain on LT shares (M$)	1,700	3,858	6,565	9,930
Additional Gain on L- warrants (M$)	**170**	**386**	**656**	**993**

Other Impacts on the Market

So the first question is, how do we price this? Actually, it's pretty easy. It's a classic warrant or a call option model. That is the first part of the pricing equation. The call option model is then multiplied by the probability that you will be a long-term investor, which is just a question of knowing how many long-term investors you will have at the end of the vesting period. Basically, these are the same kind of issues people face when they have to price stock options. With stock options you ask yourself if your employees will still be with the company after the vesting period. We could have a more sophisticated approach if we consider that this incentive will be less valuable if the share price goes down; in that case, people do not have a reason to hold the shares. In that case, we could have a kind of down-and-out call option for people interested in option pricing.

Call Option Model (vesting + maturity, spot, strike, dividend, interest rates, implied volatility) **x Occurrence Probability**

When it comes to share-borrowing costs, the warrant should increase the cost of borrowing shares during the loyalty period. Why? People lending the shares are the long-term investors. By lending the shares, they will lose the warrants. They will only accept lending the shares if they are compensated for the lost value of the warrant. In a certain sense, it will globally increase the cost of borrowing some shares.

The warrant should contribute to reducing volatility of the underlying. Why? After the vesting period, the owners will have the ability to sell the warrants. They will sell the warrants to traders who will hedge the product, and by hedging the product, will reduce volatility.

In the case of a merger and a takeover, if there is a tender offer on the underlying we could imagine that there will be an early exercise of the warrants in order to allow long-term investors to express their views as well. That would even be the case with a hostile takeover.

Is this legal? We have two main issues here. The first one is whether we are broaching something very important—equality among all shareholders. Lawyers in both France and the U.S. suggest that this is not a problem, because all shareholders have the right to subscribe to, or to receive, the warrant. The behavior of the shareholders is used to determine if they should receive the warrant, but on day one, everybody has the right to receive it. Beyond that, there are some differences between the two legal regimes. In France, a company can just issue a warrant. In the U.S., the company has to subscribe to the warrant and pay a very minimum price—meaning the share is valued at something like $0.01. The company has to receive the approval of its shareholders, and after that it has to track fidelity. This is easy to do. In France or in Europe, you can create a new ISIN number to mark shares and shareholders, to see if people have held their shares. In the U.S., you can just use a transfer agent.

L-Shares Compared to Other Solutions

Finally, we can compare this solution to others, because this is a question rewarding fidelity and there are different possibilities for rewards. One of the key questions that we hear very often is, what kind of impact do loyalty warrants have on liquidity? We do not want to sacrifice liquidity. If you have extra voting rights or extra dividends, then the impact on liquidity does not depend on the share price. With extra shares and loyalty warrants, you have a reward that makes sense only if the share price rises. Another way of saying that is if the share price drops, then the warrants and the extra shares are less valuable and the impact on liquidity is less important. Interestingly, as we said before, when you offer loyalty warrants, you increase liquidity after the

	Extra Share	Extra Voting Right	Extra Dividend	Loyalty Warrants
Impact on Liquidity	Limited and only if stock price increases	Constant & Limited	Constant & Limited	Limited and only if stock price increases [1]
Impact on Volatility	No	No	No	Potentially reduces it after loyalty period
Impact on Share Borrowing Cost	Limited and only if stock price increases	Limited	Limited	Limited and only if stock price increases
Better alignment with management [2]	Limited	No	No	Yes

[1] *And potentially increases it after loyalty period*
[2] *Assuming the management is entitled to stock options*

vesting period, so that's pretty much positive. Additionally, when we think about alignment with management, if we consider the receiving stock options as another way to offer leverage effect to your shareholders, you have a better alignment between these two communities.

Another regular question is about possible arbitrage. People say, fine, we have a mechanism, but is there a way to get the value of the warrant without being the patient investor that the shareholders exercising these warrants are supposed to be? In other words, is it possible to hedge the product during the funding—or, loyalty—period? The answer is yes, you can hedge it. The problem is that if you hedge it, you have to deal with the bank. You go to the bank and say, I'm selling four shares with L-warrants. But the bank will need to borrow the shares to do the hedge. They will have to borrow the shares from the long-term investors who will lose a warrant if they lend the share. The long-term investors will ask for compensation for that loss, which basically will appear back in the pricing. You can hedge it, but the price of your hedge will take into account the value of the warrant. Can we create a platform to take advantage of that? Sure, but the problem is that if you create a platform, either you do a limited platform and then you lose the liquidity, or you create a very large platform. For a large platform, we have to ask if people are really ready to set up a platform for 20% of the capital of the company to share the value of the warrant. The answer is no, they are not. So the platform would be either too small or too big.

L-shares reward long-term investors for the positive value that they bring to the companies they invest in. It is very simple. We have seen that they are a resource. When you bring value and you are a resource, most of the time you are rewarded for that. You should be rewarded, so this is a mechanism to correct that situation. L-shares align shareholders' interests with those of stock option holders. They should not disturb the market, because they are just an incentive. These warrants do not dramatically change the liquidity or whatever; they are marginal. And it works only if the share price does not drop significantly.

The bottom line is that these are stock options for long-term investors. If you bring additional value, if you play the role of a patient investor, just like employees, then you should have additional financial rewards. Thank you.

DISCUSSANTS

WILLIAM BRATTON: I think this paper makes an important intervention, because corporate governance as agency cost reduction has reached a mature stage of evolution. One result of that is a built-in bias towards managing to the market price of stock. It is time to look for correctives, and I think L-Shares are particularly welcome as an addition to a very short menu.

Since when does corporate governance mean managing to the stock price? For reasons that can be best explained historically, corporate governance worries more about agency cost reduction than it worries about long-term investment. The paradigm tells us that management authority implies agency costs and that agency costs would be reduced if we cleared a way for shareholder input. Now, that would be fine if the inputs came from a well-informed blockholder, but we are mainly talking about dispersed shareholders. Dispersed shareholders labor under information asymmetries and lack expertise respective to production function. In agency theory, this is the point where the market price of the stock comes in to solve all the problems. It's thought to hold out an objective and accurate measure of purely motivated shareholder maximization, management instruction. Manage to the stock price, and you get the best result.

I think it was fair to say that agency cost reduction amounted to a pressing problem 25 or 30 years ago during the takeover era. The passing of the takeover era resulted in the marshalling of new forces to address the agency cost problem. Managers became sensitized to the benefits of shareholder value maximization. The board of directors became a more robust monitoring institution, and together they used equity compensation plans to redirect management incentives in the shareholders' direction. Merger volume reached new records, with friendly rather than hostile deals as the means of moving assets to higher valuing users. Cash began moving into shareholder pockets more seamlessly, in the form of open market share repurchases, which were hardly ever seen before 1987. Discipline, a factor supposedly lacking after the retreat of the hostile takeover, made a big return when private equity buyouts reemerged in the mid-1990s. Hostility also made a comeback a decade ago, but on a new platform independent of control transfer, in the form of hedge fund activism. The hedge funds taught us that the shareholder collective action problem was not as preclusive as we had been assuming. Shareholders have become so important that managers now bond themselves to shareholders by voluntarily pulling down their takeover defenses.

Even as leading opinion in the governance world continues to depict an excess agency cost emergency, I think it is time to adjust the view. To help with this, it is useful pull out the agency cost urtext, Jensen and Meckling. It predicts that actors will address agency costs as they arise over time with managers bonding their fidelity to their investors and investors monitoring their investments. If an agency cost remains unaddressed, it is because its removal is too costly. The agency cost picture accordingly should not be expected to be static. The system will not leave a lot of money on the table in the form of unaddressed agency costs. It is going to adapt dynamically toward the end of removing the money. Nor should agency costs be expected to be reduced to zero. The fact that an agency cost can be identified does not by itself justify a governance initiative design to facilitate the reception of shareholder inputs at the business planning table.

Indeed, I wonder rather we've reached a plateau on which further enhancement of shareholder inputs has a perverse effect increasing agency costs. That being the way I see things, I come to Patrick and Frédéric's paper ready to play. I think this paper addresses the salient problem in corporate governance today. We are just starting to see the literature on the shaping of shareholder populations, and I think L-Shares are going to be a major addition to the list of techniques. L-Shares hold distinct advantages. For one thing, I think L-Shares are doable in a U.S. boardroom; I do not think shareholder approval would be required for an L-Share scheme, although I do think it would be required for a dividend loyalty scheme. Somewhat ominously, the source of L-Shares' legal facilitation lies in the same sections of the Delaware Corporate Code that enabled the poison pill. All the board needs is a blank check stock provision in the corporate charter. I also doubt that the scheme's wealth transfer effect would cause any legal problems in this country.

Now, compare the alternative of a weighted voting scheme. A weighted voting scheme does not necessarily require shareholder approval either, but it runs right up against existing stock exchange rules. While many companies have weighted voting capital structures, we have no experience with weighted voting as a sorting device for long- and short-term clienteles. U.S. companies have also implemented tenured voting schemes that give you more votes as your holding period gets longer. In that case, there is a strong association with anti-takeover defense, and the schemes have a tendency to cause controlled gravitatation to insiders with small equity stakes. L-Shares look especially good when compared to transfer tax reform or adjustments to the income tax system. They are voluntary; you do not have to go to Washington to open the tax policy box. The structure is introduced to companies in the markets, and they can opt in if they like it. Over time, we get to observe and test the results.

Note, though, that the motivation and agenda control here lie more in the boardroom than with the shareholders. Corporate proxy access, as recently facilitated in Delaware Corporate Law, makes for an interesting contrast. It allows shareholder generated bylaws that open the door to subsidized shareholder board candidates. You get proxy access to the extent that activist shareholders deem it to be an investment-grade form of governance initiative and the rest of the shareholders agree. I suppose that nothing would stop an activist shareholder from pushing L-Shares—in fact I think it would be interesting to talk to union pension funds and state pension funds about L-Shares as a proposition—but I see management more as the mover here. The question is whether that presents a problem.

The paper points to a number of situations where it does not present a problem. I doubt there would be any manager-shareholder conflict in the case where L-Shares provide a long-term give-back for a hard times dividend cut, or where L-Shares are used to smooth distortions attending an IPO. There might be some questions when L-Shares appear in a package tailored for a needed strategic investor, but I think those questions would go to the overall deal, rather than specifically to the L-Shares.

Let's hypothesize a big cap company that wants to use L-Shares to induce a shift in the shareholder population. The CEO decides to act as a normative entrepreneur for L-Shares. What signal does this first-mover manager send to the markets at the roll-out press conference? How do the institutions and intermediaries react? Is the signal negative, because the governance community sees L-Shares as a stealth version of the defensive charter provision?

Patrick and Frédéric suggest that if a company rolling out an L-Share scheme prices the option at the money, it can signal its confidence in the stock. Okay, but that's only one part of a more complicated picture. Patrick and Frédéric carefully model the arrangement so as to fit it as neatly as they can into prevailing governance mentality. The value accruing to the long-termers is stressed to be compensation for investment in monitoring, rather than as a short to long wealth transfer—a reward or a bonus for sticking around. The numerical example of 2% of the stock price, with a $0.20 drop on $100, $100 a wealth transfer on $100 is pretty innocuous. If we increase the warrant value and a percentage of loyal shareholders, the wealth transfer effect increases along with the present negative effect on the stock price. The paper suggests that there could be a countervailing set-off for expected gains due to a long-term perspective, but that depends on whether the market expects a shift in the shareholder population toward the long-term to translate into a productive shift at the decision-making market. I do not see any reason why a short-term shareholder should not perceive that. At the same time, the short-termer might wonder whether the management, thus impacted, might be less inclined to favor decisions that result in advantageous exit opportunities. The projected management effect would also depend on the numbers; presumably the bigger the aggregated payoff in long-term holding, the bigger the constituency, and the more likely the effect on decision outcomes. The tension is within the present stock price.

There's also a question about entrenchment. Patrick and Frédéric are very careful to specify that a sale of the company triggers immediate vesting, so that no *ante* sale shareholder constituency becomes embedded. On the other hand, I think we are making the target a little bit more expensive, and we might be making an issuer less attractive from the point of view of a hedge fund. Unless the fund invests prior to or contemporaneously with L-Share dividend, it is making its investment, by definition, in stock that is short-term and benefits less per for share for any resultant share value enhancement. I also wonder whether some might view an equity capital structure that has a long-term constituency as intrinsically prone to entrenchment. I hope not, but I wonder. Thank you for a very useful paper.

MAX VON BISMARCK: First of all, let me thank Columbia University for inviting me. I think this is an excellent paper, and I very much believe in the idea. In my comments, I will mainly focus on the macroeconomic perspective, because that is in line with work that I have done in my previous role as Head of Investors at the World Economic Forum, and secondly because I think William commented quite a bit on the more technical merits of the paper.

Allow me a few minutes to frame why I think this is an important paper, and where it could add the most value in combating an increasing short-termism in capital markets. We have obviously seen evidence, which the paper also cites, that markets have become increasingly long on short and short on long. As the paper cites, on the financial market side, there are decreasing stock holding periods and the rise of high frequency computer trading. On the corporate side, one could point to ever-decreasing tenures of CEOs and disproportionate focus on quarterly earnings.

How can you address these trends? At the World Economic Forum, we took the perspective that you had to start at the capital market level, in particular with the asset owners providing capital to the markets. That is exactly the perspective that this paper takes. When we were thinking about it, our first question was what it means to be a long-term investor today. Who are these long-term investors? And what has constrained their execution of a long-term investing strategy? What does long-term actually mean? It is obviously relative. If you think about this in terms of public speaking, on one hand, you have Fidel Castro, who has probably never given a speech shorter than four hours. On the other hand, you have me. I'm northern German, and where I come from, people are comfortable sitting next to each other and enduring extremely long periods of awkward silence. For me, speaking for 10 minutes is actually really long. The same goes for financial markets: for some people six months is long, and for others, it means generational wealth transfer. The perspective that we took was to say that long-term investing is actually the expectation of potentially holding an asset for an infinite amount of time, with the capacity to do so. You do not necessarily have to hold it infinitely, but you have to take that perspective.

A lot of people have pointed out that there is probably increasing societal need for investors who have that capacity. You could point to the ability to provide a counter-cyclical force in the markets in times of stress; to impacting the horizons of corporate managers, which this paper does; or providing capital to long-term projects to address the huge infrastructure gap. You can also point to the ability to incorporate environmental, social and governance (ESG) factors and the question of universal owner theory, which I am not going to dive into today. The financial crisis has basically made a lot of investors who thought they were long-term realize what key constraints they actually face in a range of ways. Many underestimated the true liabilities under stress. Other funds questioned long-term investment beliefs about whether you can really generate better long-term returns. In terms of risk appetite, a lot of investors faced the question of how much short-term volatility they could truly stomach; and I think some sovereign funds did that as well. In terms of decision-making structure, if your staff has a year-to-year appraisal on mark-to-market, do people think they are going to get fired before the long-term strategy is going to play out?

What you find is that these investors, who we assume are long-term investors, face different types of constraints in different ways. We probably thought that family offices are in the best position, because they have minimal payouts and probably slightly higher risk tolerance. On the other end of the spectrum, you have life insurance companies, who every 10 years distribute 60% of their current assets to beneficiaries. We think sovereign wealth funds are probably somewhat in the middle, though it depends on the type of sovereign fund. Stabilization funds are less likely to be long-term investors and development funds are multi-generational funds. Certainly sovereign funds have fewer problems on the liability side, but at times they face some public pressure. If you think about all of these investors that are traditionally deemed long-term investors, and take the aggregate market of professional managed assets at roughly \$65 trillion, we estimate about half of that—\$27 trillion—are managed by these long-term investors. The constraints that I outlined probably lead to the fact that only 25% of their investments actually end up being managed in a long-term way. We start with the market at \$65 trillion, but you're down to \$6.5 trillion in terms of a long-term investing capacity.

If we look forward, is this going to get better or worse? If you look at the different types of investors, there are certain types of investors where we think the capacity to invest for the long-term is increasing. Family offices, endowments, and sovereign funds are part of that group. We think the constraints on them are roughly going to stay the same, but the capital is going to increase. There is a group of defined-benefit pension funds and insurance funds, whose long-term capacity we think will decrease quite a bit. For defined-benefit funds, there is a lot of new, post-crisis regulation, which is meant to bring more transparency into the financial markets. Mark-to-market accounting and minimum funding rules, however, are also making those investors more short-term. In the insurance industry, for example, solvency has the potential to drive the entire European insurance industry out of equities and risk assets, if they have to prepare for a 100 or 200-year solvency event. You could say this is good and bad. From a societal point of view, the bad thing about this is that currently, 80% of long-term assets are actually held in these two groups.

When I think about the objective of the paper, we face two major issues to address short-termism in capital markets. Firstly, at a time where you could argue that the need for long-term capital is increasing, actually the supply of long-term capital is decreasing quite a bit. Secondly, a lot of the existing long-term shareholders do not engage. They are passive, pretty much dead and silent shareholders. The concept of loyalty shares could contribute on both of these issues. Personally, I am more excited about the potential in terms of getting existing long-term shareholders to become more active. I don't believe that there is a moral argument for the long-term being better than the short-term. There is a role for long-term investors and short-term investors in markets, but the problem is one of balance. We do not lack short-term capital. In terms of the activist investors that are mentioned in the paper, I do not think that there is anything wrong with short-term activists investors voicing their views. The problem is that long-term investors are essentially dead shareholders, for the most part. So the short-term activists gain a disproportionate amount of influence.

The thing that I am most excited about in this paper is your reference to Hirschman's two options of influencing, which are to exit or voice. The loyalty reward that L-Shares provide can potentially tip that balance from the exit option to the voice option or strategy. If that happens, it could be very significant. On one hand, people holding shares for a longer time is good and potentially adds stability to the markets. As long as those shareholders stay completely passive and do not engage, however, the impact on short-termism is going to be limited. As you point out, activism comes with a costs and the rewards have a time lag. So the idea of the reward having the potential to entice long-term investors to become active responsible shareholders, is very promising.

One last comment on the sovereign funds. Because of the Santiago Principles and out of the fear that sovereign funds could be political investors, we have basically forced them to be completely passive, when they could be constructive long-term investors. Charlie Munger once said that corporate governance has been operating according to an honor system: shareholders have the honor and corporate managers have the system. Hopefully, the concept of loyalty shares, with its embedded compensation, can entice and push long-term investors to want more than the honor.

FURTHER DISCUSSION

AUDIENCE QUESTION: I have two questions. The first sort of accepts your thesis. I question whether this is the best way forward, because I think there are some costs to this which have not come up yet, and I just want to raise them. The premise is that there is a market failure with insufficient activism, and the way to address this is to reward long-term investors, assuming that they will be activists. But we know that, of the investors that hold stakes for long-term, perhaps half of them are index funds, so the reward will be given to investors who by definition will not engage in activism. That is a costly way to go about getting activist investors. I wonder how this might work if you focused on a way to reward activism itself, as opposed to equating investment horizon with activism, when it is not clear that those are the same.

Secondly, I'm just wondering whether there is a cost from a governance perspective. This certainly makes it more costly for hedge funds to engage in activism. The evidence for the premise that hedge funds are not helpful for governance really is not there. If you look at hedge funds through 13D filings on average the returns are between 8% and 10% of normal returns for the shareholders of those companies. If this does anything to discourage hedge funds to take time-limited significant stakes, isn't there a cost to what you are proposing, too? We might discourage them from to being active, when they can be helpful for your intended aim of encouraging better governance.

SAMAMA: Actually, that's a very good point. The targets are active long-term investors, and here we are catching active and passive long-term investors.

Firstly, we have discussed with banks, transfer agents, and others whether we can add an additional layer of fidelity. Meaning that you have to keep the shares for three years *and* you must have expressed your views by voting. The problem is that it is extremely complicated for the company, or for transfer agents, to track and record people expressing their views around the world. Most of the time, they transfer these views to an intermediary, so we actually cannot find who exactly expresses views during the shareholder meetings. That is a technical issue we are facing that does not allow us to combine holding shares and expressing views. That was the objective, but technically for the moment, it does not work.

On another level, at least it sends a signal that the long-term investors are bringing value to the company. We need short-term players as well. It is a question of balance, as Max said before. Now we can have another way to balance the short-term players versus the long-term ones. The idea is to just slightly rebalance the situation without killing the short-term players. They are bringing value as well, but it is just a different value.

Regarding the question about the hedge funds, the point here is that people borrowing the shares will have slightly higher costs. Actually, it is only the people borrowing the shares and holding them for a long period of time that are impacted. If you are a hedge fund and you borrow shares, and then put pressure on the company for the next six months, you are not impacted. If you borrow shares, because you want to sell the shares for six months, you are not impacted. The only group that is really impacted are people who borrow the shares for a long period of time, because they will need to find lenders for three years, as an example. But people who might be lenders for three years are exactly the group that should receive the warrant. So they should ask to be compensated for handing over the warrant in that transfer of rights. My point here is that not all hedge funds will be impacted. The only hedge funds that will have increased cost from borrowing shares are those hedge funds that have a long-term view being negative on the underlying.

AUDIENCE QUESTION: This is a wonderful exercise in securities design. I'd like to ask the authors to focus on the character of the problem that the securities design is addressing. Thinking about this in terms of actual management decisions, the story is that myopic institutional investors cause companies to make capital budgeting decisions that, in turn, are myopic. The other characterization might be that managers are hyperopic, in that they sit in circumstances of the kind that Patrick described in the example, holding an out-of-the-money option. They maximize by extending that option as long as possible. Both of these scenarios can be true. L-Shares address one of these scenarios, but leave the choice of which state of world it is to management. How do we differentiate in the use of this tool between circumstances where the problem is market myopia, as opposed to management hyperopia? Is the world that we're addressing one that Burke would recognize, or one that Schumpeter would recognize?

BOLTON: I very much like the way our second discussant framed what the issue is. At the end of his comment, he said it is a question of balance. There are plenty of short-term activist shareholders, who are not afraid of exercising their voice. There is plenty of that around. There are not many activist long-term oriented shareholders. This is not a perfect solution by any means. Several potential problems have already been identified here. Now, we do not know how big those problems are until we have tried. We do not know how important they are, or whether they will really kill this thing or not. We are in the dark here, because we have not yet tried this out. There is value in experimentation—potentially very large value—and I think this is the time to experiment and to innovate. If you find better ways of structuring the design to distinguish between activist versus passive, for example, or hyperopia versus myopia, we are ready to listen. If you find better ways of designing the L-Shares, we would love to hear your comments.

AUDIENCE QUESTION: To press further the observation made by the last speaker, Mr. von Bismarck, referring to one of the constituents of the long-term investor community, he made reference to the Santiago Principles. He stated that effectively, one negative outcome of that agreement is rendering passive potentially active long-term investors. I'd like to press you a little bit further on that. Is it a question of transparency in governance, with respect to that particular community of investors? This would put sovereign funds in a similar category as, let's say, CalPERS or similar investors, with respect to their objective of strategically advancing the state's interest, as compared to the pursuit of commercial interest.

VON BISMARK: My view is that if you look at the universe of long-term investors, the sovereign wealth funds are one group that are massively growing, whereas a lot of the other classical types of long-term investors are decreasing in their capacity to truly be long-term investors. A lot of the sovereign funds today are set up as independent entities and think of themselves as non-political investors. Obviously there's a lot of discussion on the structure of the Santiago Principles to address the problem of sovereign funds exerting influence in a political manner. We have addressed this problem in a way that does not give them the possibility to be classical, active long-term shareholders, who could drive long-term value creation and growth within a business. I think it would be a shame to lose out on that option.

AUDIENCE QUESTION: I think my question is actually for people behind me in the audience, instead of people in front of me at the panel table. I want to pick up on the comment that the trend towards more shareholder rights has created new agency problems in corporate governance, and the discussion we just had now, about how we might differentiate between active and passive shareholders, and loyalty in an L-Share design. What would happen if we put to shareholders the choice of the price for receiving whatever the reward is, in addition to holding for a period of time, by signing on contractually to some kind of duty of loyalty? That is, in exercising their extra votes or in exercising their votes, period, they agree to act in the best interest of the corporation, much as directors are obliged to do. They would basically pay a price, in addition to holding shares for a period of time. If you were faced with that bargain, would you sign on for the reward?

BRATTON: Me? No.

AUDIENCE MEMBER: But is it an unfair bargain?

BRATTON: If you lay that duty on me, I might have a plaintiff's lawyer coming after me. It is a radical proposition, for sure. Is it unfair? No. I would not myself voluntarily undertake it.

AUDIENCE QUESTION: Max von Bismarck discussed a catalog of candidates for long-term investors. One category that was omitted, which I think is the most important of potential long-term investor in the future, is defined contribution (DC) plans. Defined contribution plans currently account for about $20 trillion of assets under management, and as we all know, this is the asset class that is going to be growing most aggressively in the decades ahead, as more and more of the world's retirement systems transition to DC systems. Now, the modern DC plan—whether it be a 401K or IRA in the U.S. or any other flavor of DC plan abroad—is not particularly well-suited to playing a long-term investment role right now, because a lot of those assets are passively managed. Moreover, those assets currently have a fair bit of turnover, as one 401K becomes an IRA rollover. I would imagine, as we think about the architecture of our financial system and we put those assets on the table as another candidate for long-term investors, we could easily redesign that system. These mutual funds and other pools of assets are in a very good position to either hold the particular shares envisioned here—which I think is a terrific idea—or to play some other role in pushing managers to think about long-run consequences of their decisions. I think that's probably the most important domain of long-run investors over the next 50 years.

BOLTON: I think you have hit on another obviously important area, where we need to rethink how we run our institutions, which is how pension funds manage their assets. It was in the back of our minds that if you have companies issuing L-Shares, it penalizes the types of behavior we see on a large scale today, such as unnecessary turnover, but it does not address the question of active versus passive. I think that's a hard question, but it does reorient the calculation. If you know you are going to hold the stock for three years, you want to do your homework and find out if the stock is worth holding that long. That changes the orientation, and it changes the discussion with management.