How Companies Profit From Our Mistakes

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Introduction

In Lecture 4 (The Mistakes CEOs Make), we discussed how psychological biases cause CEOs to make mistakes that erode firm value. This lecture considers the other side of the coin: how rational, unbiased CEOs can exploit the psychological biases of others (investors and consumers) to improve firm value.

Let's start with an example to fix ideas. In 1999, the bookstore Computer Literacy, Inc. decided to change its name because – ironically – illiterate customers kept misspelling its URL, www.computerliteracy.com. Its new name was Fatbrain.com. Importantly, it wasn't Fatbrain, but Fatbrain.com. Why? Because 1999 was the internet bubble, and the company may have wanted to capitalise on the demand for dot.com stocks. Indeed, its price rose by 33% upon announcement of the name change.

As we saw in my April 2020 Gresham lecture, Critical Thinking, you can always find an anecdote to support almost anything. But in fact this example is backed up by large scale data. Firms that added ".com". ".net" or "Internet" to their name between June 1988 and July 1999 enjoyed average announcement returns of 74%.[1] Now, that might be justified if indeed the firms were switching strategy to prioritise the internet, because this was a promising sector. However, the huge gains were enjoyed by name-switchers even if they never change their business model and had nothing to do with the internet. Across the 183 name switchers, this led to false value creation of $26 billion.

What's the psychological mistake that these companies were exploiting? It fits a number of behavioural biases, but one is the *halo effect* – the tendency to make judgements based on one characteristic. The market simply looked at the name, and used that as a sign that the company had great growth opportunities. We could also think of this as *categorisation*, the fact that people like to use shortcuts, or *heuristics*, to simplify complex problems. For example, it's easier to think of a business as being either online or bricks and mortar. In reality, most business sell through both channels, but investors may categorise a business with ".com" in its name as being entirely online even though it may predominantly have retail stores.

Interestingly, between August 2000 and September 2001, after the Internet bubble burst, removing ".com" from your name yielded returns of 64%. Again, this was the case even if a company retained its internet business focus. Across the 67 name switchers, this led to false value creation of $5.5 billion.[2]

And companies play this trick not only with their overall company name, but also with product names. For example, investment management companies changed the names of funds to reflect current "hot" styles. This might involve adding the word "Cautious" to your name in a downturn or "Growth" in an upswing. Funds that did so enjoyed 28% more inflows over the next year, compared to similar funds

[1] Cooper, Michael, Orlin Dimitrov and P. Raghavendra Rau (2001): "A Rose.com By Any Other Name." *Journal of Finance* 56, 2371-2388.

[2] Cooper, Michael, Ajay Khorana, Igor Osobov, Ajay Patel and P. Raghavendra Rau (2005): "Managerial Actions in Response to a Market Downturn: Valuation Effects of Name Changes in the Dot.com Decline." *Journal of Corporate Finance* 11, 319-335.

that did not change their name. This increase was enjoyed even if the fund's holdings didn't change to match the investment style implied by the new name. Again, investors were fooled, as there was no improvement in fund performance.[3]

Window Dressing

The above examples might seem entertaining and quirky, but a bit narrow. Companies can't change their name all the time, so this might not be a major way they can fool investors – even if the returns from doing so might be quite large. But name changes are an example of a much more widespread phenomenon called *window-dressing* – a company changing its appearance without actually changing its substance.

Another example of window-dressing is a company's choice of its dominant industry. All companies – even those that operate in multiple industries – are classified under a primary industry. For example, newspapers quote stock prices of companies industry-by-industry. Certain industries are more favourable to be classified under than others. A company that operates in both healthcare and chemicals would rather be classified under "pharmaceuticals" for several reasons. First, it will be placed next to other healthcare companies in a newspaper's list of stock prices. Those other companies have high valuations (healthcare is more highly valued than chemicals), making it easier for it to justify a high valuation. Second, healthcare mutual funds would be more likely to buy it, but chemicals mutual funds don't exist. Third, equity analysts are more likely to cover pharmaceuticals as it's a more exciting sector, thus attracting more investors to the stock.

The US regulator classifies the primary industry of a company according to sales. A study finds that firms that are close to a 50-50 cutoff between two potential primary industries are disproportionately likely to tilt the sales to a favourable industry.[4] In the above example, a company is much more likely to be split 51-49 in favour of pharmaceuticals than chemicals. Moreover, the division in the more favourable industry has lower profit margins and inventory growth rates, suggesting it slashed its prices to boost sales and get over the 50% threshold. It's more likely to have to restate future earnings, suggesting that it may have crossed the threshold due to misreporting.

And the company benefits from such window-dressing. When the switch into a more favourable primary industry is announced (upon a company reporting its annual sales figures), the stock price goes up by 1.4%. Again, *categorisation* plays a role here, since little changes if a company moves from a split of 49-51 to 51-49. Switchers then take advantage of the higher stock price by issuing equity or engaging in stock-financed M&A. The CEO herself benefits, by exercising her stock options.

For investors, the solution is to look beyond the name or category to see what the company actually does – whether it has business units other than the primary division, and whether it activities match its name.

Catering

Window-dressing is related to another practice, known as catering. This involves giving the market whatever is "hot" at the moment, i.e. taking advantage of market sentiment. The main difference between catering and window-dressing is that, in the former, the company's actions actually do change.

The lecture contains many examples of catering. Here, rather than covering several superficially, I'll focus on just one, which is catering to the market's appetite for dividends. In the absence of taxes and

[3] Cooper, Michael, Huseyin Gulen, and P. Raghavendra Rau (2005): "Changing Names with Style: Mutual Fund Name Changes and Their Effects on Fund Flows." *Journal of Finance* 60, 2825-2858.

[4] Chen, Huaizhi, Lauren Cohen and Dong Lou (2016): "Industry Window Dressing." *Review of Financial Studies* 29, 3354-3393.

other frictions, dividend policy should be irrelevant – the famous Miller-Modigliani irrelevance theorem. However, for irrational reasons, investors have either positive or negative appetite for dividends. For example, they may see dividends as free income,
perhaps failing to recognise that higher dividends mean lower capital gains.[5] This free income is particularly valuable in bad times, where other income sources are less reliable. Or, they may see dividend-paying stocks as less risky, and shun them in good times when risk appetite is higher.

One study estimates the market's appetite for dividends by calculating the premium that dividend payers trade at over non-payers.[6] This premium indeed rises in crashes and falls in booms. The authors found that firms are more likely to start paying dividends when this premium is negative, and stop doing so when it's positive.

But isn't giving the market what it wants what a business should do? Companies should give customers what they want – this is fulfilling a market demand rather than exploiting a psychological bias. Why catering is different from simply fulfilling demand is that the activity isn't clearly in shareholders' interest. There are indeed reasons (e.g. taxes and other frictions) for why dividends might be more valuable to investors at some times more than others, but it's not clear why these reasons are different in booms rather than recessions.

And such catering can be done by funds, as well as companies. Many investors prefer funds with higher dividend yields, perhaps because they see dividends as free income. As a result, some mutual funds increase their dividend yield by buying the shares of dividend-paying companies just before they are about to pay the dividend, and selling the shares just after.[7] Such actions are costly to investors, because they incur transactions costs. Indeed, funds with dividend yields higher than what their long-term holdings would imply underperform by 2.1%.[8]

Exploiting Misvaluation

A quite different way in which companies can profit from investor irrationality is by exploiting market misvaluation. We've seen in the three prior lectures how stock prices are sometimes undervalued and sometimes overvalued. CEOs can likely detect such misvaluation as they know the company better than almost anyone.

If a CEO thinks her company is overvalued, the simplest way to exploit this is by issuing equity. Indeed, after five years, the average Initial Public Offering (a company issuing shares to the public for the first time) underperforms by 30%, and the average Seasoned Equity Offering (an already-public company selling new shares to the public) underperforms by 29%.[9] An obvious question is – why are investors fooled? Shouldn't they realise that the company must be overvalued, if it's choosing to sell shares? One explanation is that investors might indeed be irrational. They may not realise that overvaluation might be a motive; instead, some investors see an IPO as a limited window of opportunity to get their hands on shares in a promising start-up. A second reason is that the company disguises the reasons for the equity issuance, e.g. say that it it's because the company needs to finance a large investment.[10]

[5] Hartzmark, Samuel and David Solomon (2019): "The Dividend Disconnect." *Journal of Finance* 74, 2153-2199.
[6] Baker, Malcolm and Jeffrey Wurgler (2004): "A Catering Theory of Dividends." *Journal of Finance* 59, 1125-1165.
[7] More precisely, they buy just before the ex-dividend date, after which any new owner would no longer be entitled to dividends.
[8] Harris, Lawrence, Samuel Hartzmark, and David Solomon (2015): "Juicing the Dividend Yield: Mutual Funds and the Demand for Dividends" *Journal of Financial Economics* 116, 433-451.
[9] Ritter, Jay (2003): "Investment Banking and Securities Issuance." *Handbook of the Economics of Finance Vol I, Part A* Chapter 5, 255-306.
[10] This explanation still requires irrationality, since investors naively accept the justification even though average returns are negative.

Indeed, the biggest possible investment a company can make is to buy another company. In other words, overvalued companies might engaged in stock-financed mergers and acquisitions (M&A). One prominent example is AOL's purchase of Time Warner, when AOL was overvalued at the peak of the Internet bubble – and took advantage by buying Time Warner cheaply. Importantly, this "overvaluation" theory of M&A has predictions that we can take to the data. Under the theory, an acquirer that's overvalued will finance a deal with stock, taking advantage of its overvalued currency. Since it's overvalued, its future returns will be negative. One that's undervalued will finance itself with cash. Since it's undervalued, its future returns will be positive. Indeed, evidence shows that cash acquirers earn positive long-run returns and stock acquirers earn long-run negative returns.[11] Importantly, negative returns after a stock-financed acquisition don't mean that the acquisition was a bad idea. Since the company was overvalued, its stock would have fallen anyway. In fact, using the overvalued stock to buy hard assets (another company) means that the shares fall by less than they would have done otherwise. Evidence suggests that this is indeed the case.[12]

A related prediction is that acquirers should be more overvalued than targets, and that overvalued acquirers are more likely to pay for deals using shares. A study measures overvaluation by using the "residual income model", which company's stock price to the profits that it makes. Both predictions hold up in the data.[13]

Exploiting Consumers

We'll now shift gears by examining how companies can exploit consumers, rather than investors. One common way is through *shrouding* – hiding part of the "full" cost of a product. For example, the "full" cost of a printer is not only the printer itself but the cost of replacement cartridges and how many pages you can print with each cartridge. However, printer manufacturer websites typically make the cost of printing very difficult to find out, even though they are transparent about the printer's other specifications. Indeed, only 3% of printer owners claim to know the printing cost at the time of purchase.[14] Similarly, hotels make the price of a room clear on their website, but not other relevant costs, such as minibar prices or the cost of doing laundry.

If consumers are *myopic* – i.e. fail to take into account these add-on costs (either through irrationality, or rationally assessing that it's not worth their time to find out these costs), then it seems that companies' pricing strategies are obvious. They should charge low prices for the visible parts of their product (e.g. printers or hotel rooms) and high prices for the less visible parts (e.g. cartridges and hotel sundries) – and keep those high prices shrouded.

But it's actually more complicated than that. Why doesn't a competitor shine a light on such behaviour, telling customers to come to them because they have lower add-on costs? For example, assume it costs a hotel £100 to offer a room, and that the hotel market is perfectly competitive so that hotels can't make a profit. One hotel, Opaque, charges £80 plus £20 for hidden add-ons. The other, Transparent, charges £100 with no add-ons, and puts out adverts warning customers to watch out for Opaque's hidden charges. But this strategy will actually backfire and lead to consumers preferring Opaque. Since they're now aware of the hidden add-ons, they can avoid them by bringing their own alcohol, or an extra change of clothing. Say the inconvenience cost of doing so is £10 – then consumers will pay £80 + £10 = £90 for Opaque and prefer it to Transparent. Simply put, solving consumers' psychological

[11] Loughran, Tim and Anand M. Vijh: (1997): "Do Long-term Shareholders Benefit from Corporate Acquisitions?" *Journal of Finance*, 52, 1765–1790; Rau, Raghavendra and Theo Vermaelen (1998): "Glamour, Value and the Post-Acquisition Performance of Acquiring Firms." *Journal of Financial Economics,* 49, 223–253.

[12] Savor, Pavel and Qi Lu (2009): "Do Stock Mergers Create Value for Acquirers?" *Journal of Finance* 64, 1061-1097

[13] Dong, Ming, David Hirshleifer, Scott Richardson and Siew Hong Teoh (2006): "Does Investor Misvaluation Drive the Takeover Market?" *Journal of Finance* 61, 725-762.

[14] Hall, Robert (2003): "The Inkjet Market: An Economic Analysis." Working Paper.

biases is good for consumers and thus bad for the hotel industry, so no hotel has an incentive to do so.[15]

Another way to exploit consumers is to change the mix between up-front (fixed) and ongoing (variable) pricing. Consider two types of goods. One is *experience goods*, which have immediate costs but delayed benefits. An example is a gym – going to the gym takes effort, but is good for your health. The opposite extreme is *leisure goods*, which have immediate benefits but delayed costs, e.g. credit card-financed consumption.

If consumers are over-optimistic about their ability to consider the long-term consequences of their actions, they'll over-estimate their future likelihood of going to the gym. The way for a gym to capitalise it is to offer a high fixed fee and a low variable fee.[16] The consumer accepts this contract because he thinks he'll go to the gym often and it's worth it, but ends up not being able to get off the couch.

Now you might think that such a pricing strategy isn't necessarily exploitative. You might think that it actually helps out consumers. If it takes effort to go to the gym, you should make the incremental cost of going to the gym as low as possible to encourage gym attendance. So the way to show that consumers are fooled is to look at data. A study found that gym members who pay a monthly fee of $70 attend the gym only 4.3 times per month, which works out to $17 per visit. An individual visit would only cost $10 with a 10-visit pass.[17] These losses are significant – the average member forgoes savings of $600, out of a total of $1,400 paid to the gym. For consumers, the solution is either to avoid the high fixed fee, or implement the self-control devices to encourage gym attendance from my March 2020 Gresham lecture, Mental and Physical Wellness.

For leisure goods, the pricing strategy is the opposite – to have a low fixed fee and a high variable fee. Some mobile phone contracts offer a low monthly charge, but a high price of extra minutes if you exceed your allowance. Consumers are overconfident about their ability to refrain from chatting on the phone (in the place of other activities such as work or going to the gym), and so accept the contract but exceed the allowance. The fixed fee can even be negative. A credit card user who pays off his balance each month receives interest-free credit plus cashback or points. However, many users end up paying very high interest rates as they overestimate their ability to control their spending and then end up carrying balances that they can't fully pay off.

[15] Gabaix, Xavier and David Laibson (2006): "Shrouded Attributes, Consumer Myopia, and Information Suppression in Competitive Markets." *Quarterly Journal of Economics* 121, 505-540.
[16] DellaVigna, Stefano and Ulrike Malmendier (2004): "Contract Design and Self Control: Theory and Evidence." *Quarterly Journal of Economics* 119, 353-402.
[17] DellaVigna, Stefano and Ulrike Malmendier (2006): "Paying Not to Go to the Gym." *American Economic Review* 96, 694-719.