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Hidden Investment Opportunities

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Introduction

Lecture 1, The Psychology of the Stock Market, showed that the stock market sometimes overreacts to information, but sometimes it underreacts. Mistakes in both directions seems to be even stronger evidence of market inefficiency than if mistakes were only one-sided. But it might also seem confusing. How do we know when the market overreacts and when it underreacts? This seems pretty crucial, since they have different predictions for stock prices.

This lecture will drill down more precisely into what the stock market overreacts and underreacts to, in order to identify hidden investment opportunities from exploiting market mistakes. Surprisingly, even though overreaction and underreaction might seem to be the opposite of each other, they have a common source – overreaction is often due to underreaction.

How can this be? Because psychological studies find that humans tend to overweight salient information (information that's particularly visible and accessible) and underweight non-salient information (information that's hidden). Sometimes, salient and non-salient information go in different directions. For example, if a company reduces the employee training budget, profits go up, but the quality of its workforce goes down. Profits are salient – they can be communicated easily in financial statements. But workforce quality is not salient – there's no easy way for investors to assess it. So, investors may overreact to the increase in profits, because they underreact to the fact that employee training has simultaneously fallen.

Let's now broaden this example out.

The Accrual Anomaly

A famous study on this topic uncovered what's now known as the *accrual anomaly*. To explain this, I first need to explain what an accrual is. Let's say a lawyer does 1 hour of work for £200/hour. She won't bill her client until amassing 50 hours of work, so her immediate *cash flow* from this work is zero. However, her *profit* is non-zero, since she's actually earned the money – she's just not yet been paid. But it's unclear how much money she's actually earned. It might be less than £200, because at the end of a project, the client might argue that some of the work was unnecessary and want to reduce the bill by £20. Or, the client might be in financial difficulties and might not end up being able to pay. The key point is that the law firm has *discretion* over how much of the £200 to book as profit (within the broad confines of accounting standards).

A related concept is *depreciation*. A taxi company earns £5,000 (fare receipts less fuel and wage costs), using a taxi that it bought last year for £10,000. Its net cash flow for the year is £5,000 (since it already paid for the taxi last year, there was no cash outlay on the taxi this year). But its profit is less, because the taxi will have suffered wear and tear – this is known as depreciation. How much wear and tear should the company recognise? It could assume that the taxi has a 5-year useful life, and that it loses the same amount of value each year, known as *straight-line depreciation*. Then, its depreciation will be £2,000, and its overall profit is £3,000. But again, the company has some discretion over how much depreciation to book. It might use a different useful life (say 4 or 6 years). Or it may not assume straight-line depreciation, but accelerated depreciation – the car loses more value at the start of its life than at the end. As soon as you drive a car out of the showroom after purchasing it, its value drops significantly as it now becomes a "used car".

Accountants often refer to depreciation as a *deferral*, rather than an *accrual*. However, I include it within "accruals" here, as that's what the study does. And that makes sense for our purposes. The unifying factor is that both types of "accrual" are reasons why profit is different from cash, and why companies have discretion over how much profit they claim to have earned.

So, there are two ways in which a company can increase its profit. One is by genuinely earning it, through generating cash flow by working on a legal project and chauffeuring taxi passengers. Another is by changing its accruals. Note that many accruals are valid adjustments to profit, rather than manipulation – it makes sense for the law firm to book some profit immediately. But, accruals can also be manipulated. If the taxi company wants to increase its profit, it could suddenly assume that its taxis have a longer useful life, thus reducing its depreciation charge.

Going back to the topic of this lecture – hidden investment opportunities – the key point is that accruals are hidden, because they're non-salient. When companies announce their profits, investors pay huge attention to the profit number, but far less attention to accruals. The study found that firms with high accruals suffer negative future stock returns, and firms with low accruals enjoy positive future stock returns.[1] These negative/positive returns particularly arise around future earnings announcements. Accruals are not persistent – a company could change its accounting policy to increase its accruals one year, but won't be able to do that in future years. (In contrast, cash flows are persistent – a law firm with many clients one year will likely have many next year). But, the market doesn't realise that this year's high earnings were due to accruals – next year's earnings come in lower and so the stock price goes down.

If the market underreacts to accruals, then it must also be overreacting to earnings.[2] A separate study broadens the idea of accruals to include other ways in which a company can inflate earnings, such as cutting investment. It divides firms into two categories. "False Beaters" are firms that just beat earnings forecasts due to high accruals, low R&D, or low advertising. "Honest Missers", in contrast, are firms that just missed forecasts due to low accruals, high R&D, or high advertising. The researchers found that False Beaters outperformed Honest Missers by 2-4% in the short-term, but underperformed by 15-41% over the next three years.[3] So the market overreacts to earnings, but underreacts to how they're achieved.

Now that we know that the market underreacts to non-salient information, this opens up a whole Pandora's box of potential hidden investment opportunities that use such information. To keep the lecture focused, I will discuss just two, but the insights apply more widely – and might spark your own creative juices into thinking about information that's value-relevant but that the market may be ignoring.

Signals of CEOs' Private Information

CEOs have more information about the value of their company than anyone else. As outside investors, we'd like to infer this information, so that we can buy when the CEO has positive information and sell when she has negative information. We can't use a CEO's public statements to guide us, as CEOs have incentives to sound bullish, even when they're genuinely concerned, to prop up the stock price. But it turns out that we can use a CEO's own actions to infer her private information – in particular, because the market doesn't recognise their relevance.

One such action is where a company chooses to hold its Annual General Meeting (AGM). Companies are required to hold such meetings each year, but they can be notoriously inconvenient for management. For example, at McDonald's 2013 shareholder meeting, a 9-year old girl was famously planted to tell CEO Don Thompson "it would be nice if you stopped trying to trick kids into wanting to eat your food all the time". Thompson's spontaneous response, "we don't sell junk food", went viral and was ridiculed by the media.

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[1] Sloan, Richard G. (1996): "Do Stock Prices Fully Reflect Information in Accruals and Cash Flows about Future Earnings?" *The Accounting Review* 71, 289-315.

[2] How does this square with Lecture 1, which suggests that the market underreacts to earnings? That lecture showed that the market underreacts to earnings *in general*. This study suggests that it overreacts *specifically* to artificial earnings boosted through accruals or investment cuts.

[3] Bhojraj, Sanjeev, Paul Hribar, Marc Picconi and John McInnis (2009): "Making Sense of Cents: An Examination of Firms That Marginally Miss or Beat Analyst Forecasts" *Journal of Finance* 64, 2361-2388.

CEOs who are truly confident about their company's prospects are happy to face investor questions, as they know they'll have good answers. But those with skeletons in the cupboard will wish to avoid these questions. It can do so by holding its meeting at an inconvenient location, to deter shareholders or the press from attending. This in turn implies a trading strategy for astute investors – short companies with remote meetings. A study indeed investigated this strategy.[4]

70% of shareholder meetings are non-evasive, occurring within 5 miles of the headquarters. But at the other extreme, the authors found 34 meetings that took place overseas. General Cable is headquartered in Kentucky but has held its annual meetings in Spain, Costa Rica, and Germany; a mining company held a meeting at one of its mines. Even for domestic meetings, the company can choose to hold it hundreds of miles from a major airport. For example, TRW Automotive held its 2007 meeting in McAllen, Texas, at the Southern tip of the continental United States near the Mexican border – 1,400 miles from the company's headquarters outside Detroit, and 300 miles from the nearest major airport (Houston). One company held its meeting in Lahore, Pakistan – so shareholders would have to brave terrorist threat to attend it.[5]

Particularly suspicious are companies that hold the meeting at the same location every year, but make a one-time deviation. For example, 9 out 10 years, the regional bank KeyCorp held its annual meeting close to its Cleveland headquarters, but in one year it held it at an art museum in Portland, Maine. Firms that hold these exceptional meetings – that involve one-time deviations – underperform their peers by 11.7% over the next six months. Similarly, companies that hold their meetings at remote locations (defined as 50 miles from their headquarters and 50 miles from a Tier 1 airport) underperform by 6.8%. Moreover, the future underperformance goes up with both distance measures.

Most shareholder meetings take place in May. Thus, the subsequent 6-month period typically includes the firm's Quarter 2 and Quarter 3 earnings announcements. Over the whole sample, the average return to an earnings announcement is +0.41%, because firms typically meet or beat their earnings target. However, firms that hold exceptional meetings (a one-time deviation from the standard location) suffer returns of -2.24% at future earnings announcements, suggesting that they miss their targets.

In sum, holding a meeting at an evasive location is a sign that managers have negative information they wish to hide. But it's also a non-salient piece of information that most investors ignore. Even for the largest companies in the world, such as Apple, Google, and Facebook, I don't know off the top of my head where they held their last meeting.

Intangible Information

A second type of information that the market may underreact to is intangible information. This is the value of a company's *intangible assets* – non-physical assets such as corporate culture or customer loyalty. *Tangible assets*, such as factories or machines, can be included on a company's balance sheet. But accounting standards don't allow companies to include most intangible assets on their balance sheet, because they're difficult to quantify. For a tangible asset, you can roughly estimate its value by taking how much you paid for it and subtracting depreciation. But intangible assets are rarely purchased externally; they're often developed internally. Sometimes they're developed without cost (e.g. corporate culture can be built through trustworthy management), but this doesn't mean they have no value.

One of my studies investigated a key intangible asset that's important in nearly every firm: employee satisfaction. It found that the "100 Best Companies to Work For in America" beat their peers by 2.3-3.8% per year over a 28-year

[4] Li, Yuanzhi and David Yermack (2016): "Evasive Shareholder Meetings." *Journal of Corporate Finance* 38, 318-334.
[5] However, this meeting was not included in the final analysis due to the unavailability of other data.

period, which is 89-184% compounded.[6] These results are robust to controlling for industry performance, controlling for a large list of firm characteristics, equal- or value-weighting, and removing the effect of outliers.

I mentioned this study in my first ever Gresham lecture in October 2018, entitled Purposeful Business: The Evidence and the Implementation. However, here I'm discussing it in a quite different context – to highlight its implications for investor psychology, rather than for purposeful business.

The striking feature about the Best Companies survey – in contrast to other measures of purposeful business, and indeed the location of shareholder meetings – is that it's particularly salient. The list is released in mid-January each year in the highly-circulated *Fortune* magazine, to much fanfare, and it's easy to see who's on this list. While you'd have to look up the location of shareholder meetings one-by-one, this list gives independent certification of the employee satisfaction of 100 companies in one go. Moreover, the companies on this list are large, public companies, which are likely to be at the forefront of investors' minds. It can't be that investors are ignoring the information simply because they don't know of it.

Yet they do ignore the information. I delay calculating my stock returns until February each year, giving the market a couple of weeks after list publication to react to information. Despite the delay, I still am able to document superior returns. Moreover, I find that it takes the market 4-5 *years* before it fully incorporates the benefits of employee satisfaction into the stock price.

What this means is that salience vs. non-salience is not the only relevant dimension. A second relevant distinction is whether information is tangible or intangible. Tangible information, like the value of tangible assets on a balance sheet, or a company's quarterly earnings, can easily put it into an investor's valuation model. But intangible information is much likely to be incorporated, for two reasons. First, it's harder to *assess*. It's clear that tangible information such as profits are good for a company's value. But it's not actually clear whether high employee satisfaction is valuable – it could be a sign that employees are overpaid or underworked. Indeed, my study starts with a *BusinessWeek* quote from an equity analyst, saying "[Costco's] management is focused on employees to the detriment of shareholders. To me, why would I want to buy a stock like that?" Second, it's harder to *process*. Even if an investor knew that a company has high employee satisfaction, *and* understood that employee satisfaction is valuable, she doesn't know how much to change cell C23 in her Excel spreadsheet to account for this fact.

In sum, hidden investment opportunities are particularly likely to come from information that's non-salient, intangible, and/or misunderstood. This explains the rise in popularity of Responsible Investing. Socially Responsible Investing is the use of Environmental, Social, and Governance (ESG) factors to pursue social as well as financial goals – e.g. invest in companies with high employee satisfaction since you believe that it's morally right to support companies that treat their workers well. Responsible Investing, in contrast, is the use of ESG factors to pursue purely financial goals. Even financially-motivated investors now use ESG factors because they believe they are relevant to a company's value, but that other investors may ignore them, wrongly thinking that responsible companies are "fluffy" and "do-gooder" rather than commercial and successful. Yet the evidence shows that certain ESG factors are positively linked to long-term stock returns. For further information, please see my inaugural Gresham lecture, Purposeful Business: The Evidence and the Implementation and my book *Grow the Pie: How Great Companies Deliver Both Purpose and Profit.*

The description of the "Evasive Shareholder Meetings" paper is adapted from my blog, "Access to Finance", at https://alexedmans.com/blog/investment-strategies/underperformance-of-companies-holding-meetings-in-remote-locations/

[6] Edmans, Alex (2011): "Does the Stock Market Fully Value Intangibles? Employee Satisfaction and Equity Prices." *Journal of Financial Economics* 101, 621-640; Edmans, Alex (2012): "The Link Between Job Satisfaction and Firm Value, With Implications for Corporate Social Responsibility." *Academy of Management Perspectives* 26, 1-19.