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# Behavioural Economics and the Non-Frustration Rule: Accounting for Bias

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## INTRODUCTION:

On March 6, 2018, Just Eat PLC lost £728 million from its market value.[1] The cause of this significant drop was the decision to utilize their soaring revenue to invest £50 million into new markets.[2] Unilever PLC, a company that generates profits of around £5 billion a year, has attempted to leave the United Kingdom (UK) to be based solely in the Netherlands to protect itself from future takeover bids.[3] Another company bought GKN

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[1] Aliya Ram, *Just Eat shares slide after setting out £50m investment plan*, FINANCIAL TIMES (Mar. 6, 2018), https://www.ft.com/content/4494d6c2-2119-11e8-9efc-0cd3483b8b80.

[2] *Id.* £50 million was over 10% of the company's value at the time. *Id.*

[3] Jonathan Guthrie, *Unilever has chosen to protect itself from British capitalism*, FINANCIAL TIMES (Mar. 16, 2018), https://www.ft.com/content/d6807a36-284a-11e8-b27e-cc62a39d57a0; Andrew Edgecliffe-Johnson, *Unilever chief admits Kraft Heinz bid forced compromises*, FINANCIAL TIMES (Feb. 27, 2018), https://www.ft.com/content/ea0218ce-1be0-11e8-aaca-4574d7dabfb6.

PLC, an engineering company with 259 years of history.[4] This buyer has the intention of selling GKN in three to five years for a profit.[5] These three events are united by one thing: a crisis within the UK economy and its ability to think "long-term" when shareholder value consistently drives short-term considerations. This in turn has been linked to the UK productivity problem,[6] or productivity puzzle,[7] which the most recent research shows is linked to a slowdown in productivity growth from the largest and most productive firms.[8] The Bank of England has suggested that decreased UK productivity growth is most likely due to a lack of investment.[9] This is not just a lack of investment in research and development, although the UK lags behind its competitors in that area as well,[10] but also in implementing the results of the research and development and thus causing a loss of productivity growth.[11] This issue has gone beyond a concern of the financial press and is now a political concern, with statements on investing in the long term, encouraging innovation, and spurring productivity—all of which are found in both of the UK's largest political parties' manifestos[12] and political speeches.[13]

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[4] Peggy Hollinger, Michael Pooler & Jim Pickard, *Melrose victorious in hostile bid for GKN*, FINANCIAL TIMES, (Mar. 29, 2018), https://www.ft.com/content/c6afe24c-3356-11e8-b5bf-23cb17fd1498.

[5] *Id.*

[6] *International comparisons of UK productivity (ICP), final estimate: 2015,* OFF. OF NAT'L STAT. (Apr. 5, 2017), https://www.ons.gov.uk/economy/economicoutputandproductivity/productivitymeasures/bulletins/internationalcomparisonsofproductivityfinalestimates/2015.

[7] Edward Curwen, *UK productivity back at pre-crisis level,* BBC (Oct. 6, 2016), http://www.bbc.co.uk/news/business-37574985; Jasper Jolly, *Productivity puzzle remains or economists despite UK growth in third quarter of 2016*, CITY A.M. (Jan. 6, 2016), http://www.cityam.com/256509/productivity-puzzle-remains-economists-despite-uk-growth; *The Guardian view on productivity: Britain must solve the puzzle*, THE GUARDIAN (Apr. 9, 2017), https://www.theguardian.com/commentisfree/2017/apr/09/the-guardian-view-on-productivity-britain-must-solve-the-puzzle.

[8] Patrick Schneider, *The UK's productivity puzzle is in the top tail of the distribution*, BANK UNDERGROUND (Mar. 29, 2018), https://bankunderground.co.uk/2018/03/29/the-uks-productivity-puzzle-is-in-the-top-tail-of-the-distribution/.

[9] *Id.*

[10] JOHN KAY, *THE KAY REVIEW OF UK EQUITY MARKETS AND LONG TERM DECISION MAKING: FINAL REPORT* 14–16 (July 2012), http://www.ecgi.org/conferences/eu_actionplan2013/documents/kay_review_final_report.pdf.

[11] Alina Barnett *et al.*, The UK productivity puzzle 122–123, BANK OF ENG. (2014), https://pdfs.semanticscholar.org/0154/fb17c0aa098eefd70990caf7cf0783910ced.pdf.

[12] *For the Many Not the Few* 17, THE LABOUR PARTY (2017), https://labour.org.uk/wp-content/uploads/2017/10/labour-manifesto-2017.pdf ("When shareholders are looking for quick short-term returns, they encourage companies to cut corners . . . instead of investing for the long term . . . ."); "[The government] must address the UK's slow productivity growth . . . ." Prime Minister Theresa May, *The Conservative and Unionist Party, Forward, Together: Our Plan for a Stronger Britain and a Prosperous Future* 20 (2017) ("[The government] must address the UK's slow productivity growth . . . ."); *Id.* at 19 ("We will work hard to ensure we have a regulatory environment that encourages innovation.").

[13] *See* Prime Minister Theresa May, Speech in Birmingham: We can make Britain a country that works for everyone (July 11, 2016) ("If we are going to have an economy that works for everyone

Therefore, regardless which side of the political spectrum power rests, the issues of investment, productivity, and takeovers[14] are paramount. These issues could be linked to capital markets transferring short-termist mentalities into the boardroom of UK companies through the market for corporate control and the UK's takeover regulation.[15] In short, the Takeover Code that regulates the UK market for corporate control does not allow any behaviour by a target company's board that would prevent its shareholders from deciding on the merits of a possible takeover bid.[16] In light of this, scholars have argued that unlike jurisdictions that do allow takeover defences or are not susceptible to takeovers to the same extent, UK companies are preoccupied with producing short-term returns over and above long-term profit generation.[17] This may be a fundamental element contributing to a dearth of investment, and consequently labour productivity that has hardly grown for nearly ten years.[18]

The purpose of this paper is to argue how reforming the UK takeover and merger rules can lead to greater long-term investment by UK firms, while causing commensurate growth in productivity without hindering overseas investment or entrenching inefficient management.

In order to analyze this problem, this paper will be broken into the following elements. The first part will set out the theoretical basis for the corporate control market transferring a short-termist mindset to UK boardrooms, which will be contrasted with the United States of America (US), French, Austrian, and German positions. These jurisdictions have been selected because each represents a developed economy with an alternative approach to UK merger regulation. The second part will analyze the suggestion that the UK Takeover Code address these issues. The final part will offer a new solution incorporating insights gained from behavioural economics: reform the regulation of takeovers to account for the predicable irrationalities in the human decision-making process. In so

. . . that means . . . doing something radical [about takeovers].") (transcript available at http://press.conservatives.com/post/147947450370/we-can-make-britain-a-country-that-works-for).

[14] *See Forward, Together: Our Plan for a Stronger Britain and a Prosperous Future*, *supra* note 12, at 17 ("We welcome overseas investment and want investors to succeed here but not when success is driven by aggressive asset-stripping or tax avoidance. We will update the rules that govern mergers and takeovers. This will require careful deliberation . . . .").

[15] François Derrien, Ambrus Kecskés & David Thesmar, *Investor Horizons and Corporate Polices*, 48 J. OF FIN. & QUANTITATIVE ANALYSIS 1755 (2013); *see also* Jonathan Guthrie, *Unilever Has Chosen to Protect Itself from British Capitalism*, FINANCIAL TIMES (Mar. 16, 2018), https://www.ft.com/content/d6807a36-284a-11e8-b27e-cc62a39d57a0; Michael Skapinker, *The Shareholder-First Corporate Model Erodes Public Support*, FINANCIAL TIMES (Mar. 6, 2018), https://www.ft.com/content/fd702c36-206b-11e8-9efc-0cd3483b8b80.

[16] *See id.*

[17] *Id.*

[18] *See* Gaganan Awano et. al., *UK Productivity Introduction: April to June 2017*, OFF. FOR NAT'L STAT. (Oct. 6, 2017), https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/labourproductivity/articles/ukproductivityintroduction/aprtojune2017 (noting that in 2016, output per hour had returned to its pre-downturn level and had slightly exceeded it for the first time since 2008).

doing, this reform will allow companies to invest on a long-term basis without fearing being taken over as a consequence—a solution based on reforming the non-frustration rule, so that companies may request authorization from their shareholders to deploy defensive measures for a particular time period, such as five years. This paper will argue that this reform would not only maintain the shareholder primacy that is so fundamental to British[19] corporate control culture, but also assist company directors in planning ahead and investing securely in the knowledge that they will not be replaced merely because they prioritize delivering long term results.

## I. THE THEORETICAL PROBLEM WITH THE MARKET FOR CORPORATE CONTROL

To begin, it is necessary to consider the theory of how markets function, particularly for shares and corporate control markets. The seminal principle explaining this market's behaviour derives from the efficient markets hypothesis (EMH), which explains that an efficient market reflects all the information available in share prices.[20] Further, beyond a theoretical stance, this is a proposed model for how financial markets in the real world actually function.

The assumptions required for this theory to work are that investors are rational and rationally value securities, meaning they should value a firm's shares based on the present value of its future cash flow once the investors factor in any associated risks. When new information becomes available—for example, an increase or decrease in the future cash flow—it disseminates through the market and the price of the shares adjust accordingly.[21] Where investors are not rational, their behaviour is assumed as irrational in a random manner causing their irrationality to balance out; for example, if fifty investors over value and stock and fifty under value, a roughly equal dispersal of shares should cancel this out.[22] Also, rational investors cancel out irrational investors' actions[23] because if a particular share's price irrationally increases, then the rational shareholders will realize this share is overpriced and that they can profit from the situation,

[19] *See infra* Part I.A. In this instance, British will be used as a term to include the whole of the UK, not just the British Isles.

[20] Eugene F. Fama, *Efficient Capital Markets: A Review of Theory and Empirical Work*, 25 J. OF FIN. 383 (1970).

[21] *See id.* at 37.

[22] *Id.*

[23] MILTON FRIEDMAN, ESSAYS IN POSITIVE ECON. 159 (U. of Chi. Press, 1953); Eugene F. Fama, *The Behavior of Stock Market Prices*, 38 J. OF BUS. 34 (1965).

so they will sell this share and buy a similar, but appropriately valued one. Rational investors selling shares will then cause the share price to return to normal, at which point the selling will stop.[24] The theory is further based upon the foundational assumptions of neo-classical economics: that the world is largely populated by *homo economicus*—an economically rational man who maximises his utility, has unlimited information processing power, and holds preferences that are stable.[25] This will be discussed in further detail below.

The consequence of this theory in relation to takeover regulation is that shareholders in a particular firm will only accept an offer for a takeover if the price paid is superior to what the company is worth (taking into account future cash flow and risk). Likewise, a takeover offer will only be higher than the current value of the company if the takeover will make the combined entity more profitable—through cost savings and economies of scale, for example. These two points combined mean that if the EMH is accurate, a takeover offer will only be made and accepted if the proposed takeover is efficient. That is to say that the takeover will create value that will not exist if the firms remain separate. It follows from the above theory that shareholders should be the arbiters of whether or not the company in which they hold shares should be taken over. If the takeover will generate value, the price will represent this. If the takeover will not generate value, the offer price will also reflect this and there will be no reason to sell the shares on. Interference with this right to accept or reject a takeover will, according to the EMH, result in inefficient results where companies are not sold when they will create value or are sold when they will not.[26] Within this context, the next step is to consider the current UK regulatory framework for takeovers.

### *A. The UK Takeover Code*

In the UK, the market for corporate control is regulated by the Takeover Panel and the body of rules it maintains, namely, the Takeover Code.[27] One of the most interesting aspects of the Takeover Code is that it almost completely prohibits a company that is the target of a takeover from engaging in any sort of behaviour that will prevent that takeover.[28] The part of the Takeover Code that is of relevance here is the non-frustration rule. The code states:

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[24] *Id.*

[25] *See* JOHN VON NEUMANN & OSKAR MORGENSTERN, THEORY OF GAMES AND ECONOMIC BEHAVIOUR (16th ed. 1953); ROBERT FRANK & EDWARD CARTWRIGHT, MICROECONOMICS AND BEHAVIOUR 56 (2013); HAL R. VARIAN, INTERMEDIATE MICROECONOMICS 3 (9th ed. 2014).

[26] *See* Fama, *supra* note 20.

[27] The Panel on Takeovers and Mergers, *The Takeover Code*, http://www.thetakeoverpanel.org.uk/wp-content/uploads/2008/11/code.pdf?v=8Jan2018.

[28] Unless given a mandate to do so by its shareholders.

> During the course of an offer, or even before the date of the offer if the board of the offeree company has reason to believe that a bona fide offer might be imminent, the board must not, without the approval of the shareholders in general meeting: (a) take any action which may result in any offer or bona fide possible offer being frustrated or in shareholders being denied the opportunity to decide on its merits . . .. [29]

What this means in practice is that the board of a target company is not able to take any action that would prevent the shareholders of the target company from deciding to accept the potential offer. This is a remarkable rule and one that places the UK market for corporate control in an unusual position. This position is one of almost unrivalled exposure to takeovers from non-UK companies, including hostile takeovers.[30] This is partly due to the rule and partly due to the make-up of shareholders in UK companies—best understood through a brief comparison with other jurisdictions.

### *B. Comparison with Other Jurisdictions' Rules.*

In the US, there is no law corresponding to the non-frustration rule. Instead, it is common for US companies to deploy "poison pill" defences.[31] In these, if a bidder who has not been approved by the board crosses a particular threshold of voting shares, all shareholders, excluding the unapproved bidder, are given the right to purchase new shares at a significant discount to the trading price.[32] This dilutes the shareholding of the potential new owner and prevents them from obtaining control.[33] As a consequence, companies in the US are placed in a position where they have significant control over potential takeovers, and therefore, if investing large amount of capital into long term projects, they may be less likely to feel exposed to a takeover threat. This is not to say there is no short-term pressure on public companies,[34] but that there is still a greater level of control over it than in the UK jurisdiction.

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[29] The Panel on Takeovers and Mergers, *The Takeover Code*, D2, http://www.thetakeoverpanel.org.uk/wp-content/uploads/2008/11/code.pdf?v=8Jan2018.

[30] *See infra* section I.B.

[31] Suzanne S. Dawson et al., *Poison Pill Defensive Measures*, 42 THE BUS. LAWYER 423 (1987).

[32] *See id.*

[33] *Id.*

[34] Concern for corporate short-termism has also been brought to the fore in the US, not least through the concerns of US President Trump. *See, e.g.* Andrew Edgecliffe-Johnson & Mamta Badkar, *Trump asks SEC to Study Scrapping Quarterly Earnings Reports*, FINANCIAL TIMES (Aug. 17, 2018); John Authers, *Trump is Right to Push Debate on Quarterly Reporting*, FINANCIAL TIMES (Aug. 17, 2018). These concerns are also evident in the attempts of Elon Musk to take Tesla Inc.

Another example of how companies in other jurisdictions are likely to be less concerned about takeover threats can be seen in France. State intervention in mergers and acquisitions in France are commonplace.[35] This is in contrast to the UK where intervention is rare.[36] Whether formally or informally, France has repeatedly intervened and disapproved of numerous control transactions when the target is seen to be of "strategic" importance.[37] But this term has been interpreted very broadly indeed, covering varying sectors, from more obvious candidates of strategic importance such as energy to more surprising sectors, such as the business of producing yogurt.[38] This means that once again, the situation of a leading firm in France is very different from the situation present in the UK, as there is a far greater possibility of a takeover being blocked by the government should a takeover attempt occur.[39]

In Austria, there is also a non-frustration rule;[40] however, the shareholder make-up in Austria is significantly different to that of the UK. In Austria, the major companies tend to have a significant controlling shareholder which renders takeovers impossible without their consent.[41] Contrast this with the UK where major companies tend to be held by a vastly diversified shareholder group.[42] UK firms tend to have low single-digit percentile shareholders.[43] This means that unlike in Austria, it is very easy for a potential bidder to purchase shares and build up a controlling interest, thus making hostile takeovers possible.

Germany has had, until recently, a relatively open market toward foreign takeovers, but now this is becoming slightly more restricted.[44] The

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private to allow the company to make decisions that are right "for the long term." Elon Musk, *Taking Tesla Private*, https://www.tesla.com/en_GB/blog/taking-tesla-private? (last visited Sep. 5, 2018); *see also* Arash Massoudi, Richard Waters & James Fontanella-Khan, *Elon Musk Declares Plan to Take Tesla Private*, FINANCIAL TIMES (Aug. 7, 2018); Shannon Bond & James Fontanella-Khan, *Electric Carmaker Founder Drops Buyout Plan, Saying His Investors Told Him: "Don't do this"*, FINANCIAL TIMES, (Aug. 25, 2018).

[35] Andreas Heinemann, *Government Control of Cross-Border M&A: Legitimate Regulation or Protectionism?*, 15(3) J. INT'L ECON. L. 843.

[36] S. Dinc & I. Erel, *Economic Nationalism in Mergers and Acquisitions*, 68(6) J. OF FIN. 2471, 2480 (2013).

[37] Heinemann, *supra* note 35, at 848–849.

[38] *See* Deborah Orr, *Danone: Not for Sale*, FORBES (June 25, 2005), https://www.forbes.com/2005/07/25/danone-pepsi-takeover-cz_do_0725danone.html (where it is stated that French legislators considered the idea of Danone being purchased by Pepsi Co "scandalous").

[39] Heinemann, *supra* note 35.

[40] See the Austrian Takeover Act at https://unternehmensrecht.univie.ac.at/fileadmin/user_upload/i_unternehmensrecht/Lehre/WS_2015-16/Kurse/Stockenhuber/030681_MuA_I/Austrian_Takeover_Act_englisch.pdf.

[41] KERSHAW, *infra* note 59 at 356.

[42] *Ownership of UK Quoted Shares*, OFF. NAT'L STAT. (2014), https://www.ons.gov.uk/economy/investmentspensionsandtrusts/bulletins/ownershipofukquotedshares/2015-09-02.

[43] B. CHEFFINS, CORPORATE OWNERSHIP AND CONTROL: BRITISH BUSINESS TRANSFORMED (2008).

[44] See Guy Chazan, *Germany expands powers to block takeovers*, FINANCIAL TIMES (July 12, 2017), https://www.ft.com/content/5087c106-66fc-11e7-9a66-93fb352ba1fe; Melanie Hall,

German government has recently passed a directive increasing their ability to block non-EU companies from acquiring more than 25% of a company where the takeover could endanger "critical infrastructure."[45] The original state of the law only allowed for takeovers to be prevented if they were a threat to national security or public order.[46] The new language can cover a far broader array of companies, for example if they write software for power plants, energy and water supply networks, electronic payments, hospitals and transport systems in addition to defence and surveillance companies.[47] It also extends the amount of time the government has to investigate takeovers.[48] This change of heart is largely prompted by two takeover attempts. This first was the successful takeover of Augsburg robot manufacturer KUKA by the Chinese company Midea.[49] This went ahead despite the resistance of the then Finance Minister, Sigmar Gabriel.[50] The second takeover over was of computer chip equipment manufacturer AIXTRON, which failed due to US security concerns since AIXTRON also supplies the arms industry.[51] It is notable that, while ostensibly this move was wholly about protecting the wider infrastructure that supports national security, Economics Minister Brigitte Zypries said at the time that she paid attention to "fair competition" and that German companies often competed with countries whose economic systems were not as open as theirs.[52] So once again, even in an economy as free and open as Germany's, it appears that there is an increasing scope for firms to be protected from unwanted takeovers.

In summary, UK companies are more open to non-UK hostile takeovers than comparable national firms in other jurisdictions. UK firms tend to have a large number of shareholders rather than a single controlling shareholder.[53] At least since 2012, UK firms possess a majority of

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*Germany moves to block takeovers by foreign investors*, THE TELEGRAPH (July 12, 2017), https://www.telegraph.co.uk/business/2017/07/12/germany-moves-block-takeovers-foreign-investors/.

[45] Verordnung, Neunte Verordnung zur Änderung der Außenwirtschaftsverordnung, Bundesregierung. Section 55.

[46] *See e.g.* Chazan, *supra* note 44.

[47] *Id.*

[48] *Id.*

[49] Edward Taylor, *China's Midea receives U.S. green light for Kuka takeover*, REUTERS (Dec. 30, 2016), https://www.reuters.com/article/us-kuka-m-a-mideamidea-group/chinas-midea-receives-u-s-green-light-for-kuka-takeover-idUSKBN14J0SP.

[50] Amie Tsang, *Midea of China Moves a Step Closer to Takeover of Kuka of Germany*, N.Y. TIMES (July, 4, 2016), https://www.nytimes.com/2016/07/05/business/dealbook/germany-china-midea-kuka-technology-robotics.html.

[51] Regierung will Übernahmen strenger prüfen, SÜEDDEUTSCHE ZEITUNG (July 12, 2017), https://www.bmwi.de/Redaktion/EN/Pressemitteilungen/2017/20170712-zypries-besserer-schutz-bei-firmenuebernahmen.html.

[52] *Id.*

[53] Cheffins, *supra* note 43, at 1.

shareholders who are not UK citizens,[54] meaning control is not just decentralised in terms of number, but also in geography. Further, due to the non-frustration rule, (as well as other corporate laws) there is nothing a UK firm can do to prevent a hostile takeover.[55] This situation gave rise to the criticism that due to the relatively high chance of being subject to the interest of a bidder, combined with the inability to prevent hostile bids, UK boards are overly concerned with protecting their position through the only real means possible: producing results from one period to the next. If this is the case then it may be a contributing factor that influences the UK's lower R&D spend[56] and lower productivity.[57] But is this actually a reasonable argument? If a company invests large amounts into R&D, will this not be taken into account by traders when evaluating the value of the company? If a company invests millions of pounds into a long-term project, assuming that project at some point yields fruit, capital will be returned to investors and that should be priced in.[58]

However, Kershaw insightfully argued that there are a several reasons why markets may not correctly evaluate the value of long term projects.[59] These are as follows: (a) managers cannot disclose great amounts of detail about projects if it would devalue the project; (b) the longer term the investment and the type of research may mean that there is a higher level of uncertainty associated with long term investments over and above short term cash, this may decrease the share price in the short term and cause concern for fund managers focused on the short term; (c) shareholders may have difficulty trusting the assessment of boards when considering a project's profitability.[60] This is because, should a manager be taken to court for misleading disclosures regarding a project, they will likely be given greater scope if their projections do not come true as the project stretches further into the future. If this is the case, managers may feel they can exaggerate the future success of a project and consequently, shareholders may not feel they can trust such predictions in the same way that they can trust a prediction that comes to fruition in two years.[61] Consequently, there may be good reasons why investors are unable to accurately assess the value of long term investments, and therefore, may tend to favour short-term returns instead.

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[54] *See Ownership of UK Quoted Shares*, *supra* note 42.

[55] KERSHAW, *infra* note 59 at 334–337.

[56] *See* Kay, *supra* note 10 (establishing low levels on investment and R&D by UK corporations and low levels compared to other developed economies).

[57] *International comparisons of UK productivity (ICP), final estimate: 2015*, OFF. FOR NAT'L STAT., https://www.ons.gov.uk/economy/economicoutputandproductivity/productivitymeasures/bulletins/internationalcomparisonsofproductivityfinalestimates/2015 (last visited June 23, 2017).

[58] Mark J. Roe, *Corporate Short-Termism – In the Boardroom and in the Courtroom*, 97 BUS. LAWYER 977 (March 15, 2014), https://ssrn.com/abstract=2239132.

[59] DAVID KERSHAW, PRINCIPLES OF TAKEOVER REGULATION 28 (2016).

[60] *Id.*

[61] *Id.*

There is also a potential issue linked to the increase in fund management.[62] Fund managers are given funds by investors through the comparison of their recent performance with other fund managers.[63] An investor considering which fund to deposit their capital in is likely to consider the fund manager who has obtained a 35% return in the last two quarters as superior to one who has obtained only 10% in the same period. It stands to reason then that the fund managers with the highest relative return will receive the most money to manage and consequently earn the most commission/fees. This may drive fund managers to prioritise short term profit, which in particular will encourage aiming to have the highest performance at the next bench-marking date. After all, there may be little benefit in achieving a 50% return in ten years if there are significant net-outflows of capital in the nine years prior. This may drive short-term focused behaviour amongst fund managers, and this may result in short term focused behaviour in the market for corporate control.[64]

This is supported by recent evidence that suggests that relative performance evaluation drives herding behaviour amongst investor portfolios. Herding behaviour is possible because institutional investors know more about their peers' trades than retail investors.[65] Evaluation based on fund managers' performance relative to their peers has been argued to produce an obvious incentive to herd.[66] Given that institutional

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[62] *See generally FUNDS UNDER MANAGEMENT*, THE INVESTMENT ASSOCIATION, https://www.theinvestmentassociation.org/fund-statistics/funds-under-management.html?what=graph&show=4.

[63] *See* Kay, *supra* note 10.

[64] Consider the following by way of illustration: Two fund managers both invest £500,000 in "Company A." Company A becomes subject of a potential takeover bid for 200p. This undervalues Company A's long-term value by 15%. During the takeover period the share price moves from 150p to 190p. This would not be unusual, as often the price moves towards the offer price subject to a discount that signifies the chance of the deal falling through. Fund manager one sells his shares at 190p. Fund manager two now suffers a difficult choice. If he sells his shares either during the bid of before he will gain a profit but will lose out in the long term due to the undervalued purchase price. However, if he doesn't sell his shares and the deal falls through then the share price will likely drop down to the pre-bid level, approximately 150p. Should this happen at the next point where fund manager one and two are benchmarked against each other, fund manager one will have benefited from significant gains in the share price (despite selling below value) whereas fund manager two will have gained nothing from the failed bid at all despite valuing the price of the shares correctly. This would no doubt look unfavourable in terms of comparative benchmarking and potentially lose business for fund manager two, despite his accurate long-term assessment of value. *See* KERSHAW, *supra* note 59, at 344.

[65] *See* Abhijit Banerjee, *A Simple Model of Herd Behavior*, 107 Q. J . ECON. 797 (1992); Sushil Bikhchandani, David Hirshleifer, & Ivo Welch, *A Theory of Fads, Fashion, Custom, and Cultural Change as Informational Cascades*, 100 J. POL. ECON. 992, 992 (1992).

[66] Andrei Shleifer, *A Theory of Yardstick Competition*, 16 RAND J. ECON. 319 (1985); David S. Scharfstein & Jeremy C. Stein, *Herd Behavior and Investment*, 80 AM. ECON. REV. 465 (1990). However, also consider how the flow of information between fund managers within their social network leads to investment patterns, which in themselves become self-reinforcing. Les Coleman, *Facing Up to Fund Managers: An Exploratory Field Study of how Institutional Investors make Decisions*, 7 QUALITATIVE RES. FIN. MKTS. 111, 121 (2015); Johan Henningsson, *Fund Managers as Cultured Observers*, QUALITATIVE RES. FIN. MKTS. 27 (2009).

investors are of such a size that their investment decisions can in fact influence the market,[67] this is highly significant. There is now sufficient empirical evidence to suggest that such herding occurs in mutual funds,[68] hedge funds,[69] and pension funds.[70] Additionally, there is evidence to suggest that fund managers are well aware that even good long term decisions can result in the loss of clients when they produce poor short term results.[71] One empirical study of fund managers' behaviour goes so far as to state that "[v]irtually all managers saw the sell decision as harder than choosing which stocks to buy, and also see this as an area where they are prone to behavioural biases."[72] This is all the more significant when considering the bid price of takeovers, where instead of evaluating long-term value, shareholders appear to consider bids through anchored expectations based upon historical prices.[73]

## II. POTENTIAL SOLUTIONS TO THE SHORT-TERMISM PROBLEM

There are a number of potential solutions to the short-termism problem. The government could intervene to a greater extent to protect companies where it believes that it is in the nation's economic interest, short-term shareholders could be disenfranchised of their votes, or the acceptance threshold for a merger could be increased. The respective merits of these possibilities will now be considered.

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[67] *See* Louis K. C. Chan & Josef Lakonishok, *The Behavior of Stock Prices Around Institutional Trades*, 50 J. FIN. 1147 (1995); Patrick J. Dennis, Deon Strickland, *Who Blinks in Volatile Markets, Individuals or Institutions?*, 57 J. FIN. 1923 (2002).

[68] Mark Grinblatt, Sheridan Titman & Russ Wermers, *Momentum Investment Strategies, Portfolio Performance, and Herding: A Study of Mutual Fund Behavior*, 85 AM. ECON. REV. 1088 (1995); Russ Wermers, *Mutual Fund Trading and the Impact on Stock Prices,* 54 J. FIN. 581 (1999); Joshua Coval & Erik Stafford, *Asset Fire Sales (and Purchases) in Equity Markets*, 86 J. FIN. ECON. 479 (2007).

[69] Richard Sias, H. J. Turtle & Blerina Zykaj, *Hedge Fund Crowds and Mispricing*, 62 MGMT. SCI. 764 (2015).

[70] David Blake, Lucio Sarno & Gabriele Zinna, *The Market for Lemmings: The Investment Behavior of Pension Funds,* 36 J. FIN. MKT. 17 (2017); Josef Lakonishok, Andrei Shleifer & Robert Vishny, *The Impact of Institutional Trading on Stock Prices*, 32 J. FIN. ECON. 23 (1992).

[71] Richard J. Taffler, Crawford Spence & Arman Eshraghi, *Emotional Economic Man: Calculation and Anxiety in Fund Managers,* 61 ACCT. ORG. SOC'Y 53 (2017). An interview with one fund manager yielded the following response: "short-term numbers . . . you know that's noise. People aren't stupid but even though they know that, commercially it's sometimes very difficult to behave in a way that's rational. In a long-term sense what's rational in terms of investment behaviour may not be rational commercially. That's the problem." And further, discussing when a manager takes an appropriate long term view but the short term results do not impress your client "even if you were completely convinced you were right, even if you don't panic, your employer might panic or your clients might panic in which case, to be honest, bad luck." *Id.*

[72] Les Coleman, *Facing Up To Fund Managers: An exploratory field study of how institutional investors make decisions*, 7 QUALITATIVE RESEARCH IN FIN. MKTS., 111, 127 (2015).

[73] Malcolm Baker, Xin Pan & Jeffrey Wurgler, *The Effect of Reference Point Prices on Mergers and Acquisitions*, 106 J. FIN. ECON. 49 (2012); Chip Heath, Steven Huddart & Mark Lang, *Psychological Factors and Stock Option Exercise*, 114 Q. J. OF ECON. 601 (1999).

### *A. Government Intervention*

The first possibility is also the easiest to reject. If investors cannot accurately evaluate the value of an investment, it is difficult to see why a government would be any better. Even if it is assumed that a firm is undervalued due to a long-term investment that is not being valued properly, it is difficult to see how this would be established objectively. There would also be the potential for generating moral hazard.[74] If a government selects a particular company to be considered of such economic import to the nation to prevent it being taken over, this may signal to the board of that company that they are "too big to fail" or at least "too important to fail."[75] This could result in the company becoming more wasteful, increasing agency costs, taking unnecessary risks, or other behaviour that reduces competitiveness.[76] This is due to the belief that should things go wrong, the government will intervene because of their economic importance.[77]

In the alternative, if the government did not focus on value to shareholders, but rather intervened when there was a general economic interest at stake or when a "strategic" industry was at risk, there would then be the risk that "strategic" would take on a particularly flexible meaning as it does presently in France.[78] In addition, as signified by the takeover of Cadbury's[79] by Kraft in 2010, the amount of pressure a government can be under to intervene in a merger may not be proportionate to the company's strategic value to the country in which it is headquartered. As a consequence, direct government intervention would be liable to result in haphazard intervention on more political than economic motivations.

### *B. Disenfranchising Shareholders*

An idea put forward by Sir Roger Carr, the previous chairman of Cadbury Plc, was that certain shareholders could have their votes removed

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[74] Ning Gong & Kenneth Jones, *Bailouts, Monitoring, and Penalties: An Integrated Framework of Government Policies to Manage the Too-Big-to-Fail Problem*, 13 INTL. REV. FIN. 299 (2013).

[75] *Id.*

[76] *Id.*

[77] *Id.*

[78] *Id.*

[79] An extremely popular confectionary company based in the UK.

when it came to hostile takeovers.[80] This proposal first requires an explanation of the current problem as seen by Sir Roger Carr. When Cadbury was subject to a bid by the US firm Kraft Foods, Cadbury initially resisted the bid considering it to be undervalued. Resisting the takeover was very difficult, however, because Carr found that once a potential bid was announced, merger arbitrageurs would buy into the company for the single purpose of completing the deal, and then making a profit when the deal goes through; the profit being the difference between the market price of the shares bought and the offer price for the shares in the takeover.[81] There is usually a gap between the two values which represents the risk that the deal will not be completed. The difficulty with this is that once a certain number of shares are acquired for this purpose, it becomes all but impossible for the board to resist a bid. This is because the merger arbitrageurs are not interested in holding a long position in the company, their plan to make a quick profit is dependent upon the deal being completed. This means the board of the target will have very unreceptive ears when trying to convince the shareholders to refuse the offer. If these new shareholders are disenfranchised, then the decision would rest with the shareholders with a long position, and as such those who are likely to have the long-term interests of the company at heart.

Kershaw has argued however that such an idea misses the problem.[82] He argues that if merger arbitrageurs have ownership of shares this is because the original shareholders who did have long positions felt that it was worth selling their shares. If this was because the offer price represented good value this is not an issue, but if, as described above, this is a result of short-termism by fund managers seeking to enhance their relative performance then the underlying problem will still exist.[83] This is because there is a risk that even if shares are disenfranchised, if merger arbitrageurs still buy the shares (despite knowing that they cannot vote on the offer) this will push the share price up. If this happens then fund managers will still feel they have to sell in order to ensure they benefit from the increase in price brought about by the bid. It is only if the disenfranchisement of shares bought during the bid discourages investors from buying shares that this change would have any effect. This is because if investors do not buy the shares the price will not rise up to near the offer level and so there will be no incentive for fund managers to sell if the bid is undervalued. This result may be unlikely if merger arbitrageurs and

[80] Amy Wilson, *UK takeover threshold should be raised, says chairman Roger Carr*, THE TELEGRAPH (Feb. 10, 2010), http://www.telegraph.co.uk/finance/newsbysector/retailandconsumer/7198336/UK-takeover-threshold-should-be-raised-says-ex-Cadbury-chairman-Roger-Carr.htm.

[81] KERSHAW, *supra* note 59 at 356.

[82] KERSHAW, *supra* note 59 at 362.

[83] *Id.*

investors are generally aware of the incentive to sell that will be created if they buy shares from fund managers and push up the price.[84]

### *C. Increasing the Acceptance Threshold for Takeover Acceptance*

Another suggestion to resolve the issue, put forward by Carr, is to increase the threshold for takeover acceptance.[85] Once again, this idea is premised on the problem that once an offer is made, shares are sold into the market by long-term shareholders and bought by merger arbitrageurs that hope to profit from the difference between their purchase price and that of the offer. Carr considered that if the threshold was increased to above 50% then this would reduce the risk of new shareholders being decisive in overriding the wishes of the long-term shareholders.[86] In theory, if the threshold is high enough and the number of shareholders who have a long-term view great enough, then their votes will be determinative of whether or not the deal goes through, rather than the votes of the merger arbitrageurs being determinative. This suggestion has been commended,[87] it has been argued that such a policy would not only be consistent with the non-frustration rule[88] but further that it would make the theory upon which the rule was founded a reality, which is that shareholders make their decisions based upon the long-term value of the shares and consequently, the company.[89] This is because it empowers those shareholders who actually work on this basis and effectively neuters, or at least weakens, the influence of those who do not.

Whilst providing a useful insight into the matter, this proposal may be missing the underlying issue. The proposal looks to *which* shareholders are making the decision rather than considering *when* they are making the decision. In essence, it assumes that there is a large body of shareholders who are incentivised to sell their shares because of relative performance bench marks whose shares are bought by those only interested in a quick profit through the deal going ahead while simultaneously there is a core of long-term shareholders who are genuinely interested in the company's long-term welfare and are not swayed by short-term incentives. In reality, it may be that all shareholders, whether retail investors or fund managers, are in a position where they are

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[84] *Id.*
[85] Wilson, *supra* note 80.
[86] *Id.*
[87] KERSHAW, *supra* note 59 at 358.
[88] The Panel on Takeovers and Mergers, *The Takeover Code*, I18, http://www.thetakeoverpanel.org.uk/wp-content/uploads/2008/11/code.pdf?v=8Jan2018.
[89] KERSHAW, *supra* note 59 at 358.

required to wrestle with the conflict between of short-term and long-term perspectives. It is at this point it becomes very helpful to consider the issues through the lens of behavioural economics.

## III. A NEW SOLUTION

### A. *Viewing the problem through behavioural economics*

Historically, economic theory has been founded upon the model of "rational choice" economics.[90] This model is based on some well-established assumptions. Rational choice theory assumes that customers enter the market with well-defined preferences and then considering the prices as given, they allocate their resources in order to best satisfy their preferences.[91] This core principle is often phrased in the following way: when market actors such as buyers and sellers are optimising, they will choose to use their capital to acquire the best products and services in the best combination that suits them.[92] Companies or firms are also considered to be rational and optimizing, but rather than seeking to satiate particular wants or needs, they are assumed to make their decisions in order to maximise profits.[93] When these two actors interact on a competitive market where prices are free, prices are altered in a way such a way that supply equals demand. This is to say that markets naturally reach an equilibrium.[94] They will do this in a logical and rational fashion, thus providing the basis for "rational choice" theory.

The difficulty with rational choice theory is that recently, the idea that humans are rational in their choices has been significantly undermined. That is not to say that humans are unpredictable, mad, or have no interest in optimizing the use of their resources. Rather, what this means is that humans tend to make predictable behavioural choices that are consistent, but logically flawed from the point of view of the rational choice model of economics. This is for a number of reasons. One of these reasons was identified very early on by Herbert A. Simon.[95] Simon noted that rather than pursuing an optimal outcome, humans—as a result of the increasingly complex decisions and the inability to calculate every possible outcome—would depend on heuristics or trial-and-error to find a

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[90] HERBERT HUGO LIRBHAFSKY, THE NATURE OF PRICE THEORY 26 (1965).

[91] ROBERT FRANK & EDWARD CARTWRIGHT, MICROECONOMICS AND BEHAVIOUR 57–58 (2013); JOHN VON NEUMANN & OSKAR MORGENSTERN, THEORY OF GAMES AND ECONOMIC BEHAVIOR (1953).

[92] HAL R. VERIAN, INTERMEDIATE MICROECONOMICS 3 (9th ed. 2014).

[93] *Id.* at 363.

[94] *Id.* at 292.

[95] *See* C. B.MCGUIRE & ROY RADNER, DECISION AND ORGANIZATION (2d ed. 1972).

satisfactory outcome.[96] Decisions then were made within a "bounded rationality."[97] This was further supported by Tversky and Kahneman, two key figures considering behaviour in the field of psychology. They found humans made consistent, predictable errors of judgement due to their reliance on certain heuristics and their underlying biases.[98] These heuristics and biases meant that humans are not only not optimising in certain situations, but rather they make predicable mistakes of judgment.[99]

A particularly important finding of Kahneman and Tversky was that humans dislike losses more than they like gains.[100] For example, the enjoyment or satisfaction of gaining £1,000 is not the same as the amount of dissatisfaction that is felt if the same person lost £1,000. Further study quantified the ratio, indicating that people dislike losses twice as much as they like gains.[101] A simple illustration could be as follows: a retailer receives a new card machine that allows his customers to pay by credit card. However, he is charged by the bank for each payment made by credit card, so he passes the charge on to the customer. He can set a fee of £1.00 for the use of the card or he could offer a £1.00 discount for those customers that use cash. Depending on which wording he uses, the outcome is essentially the same. From a rational choice point of view, the expectation would be that there would be no greater or fewer users of a card regardless of the phraseology, either a customer considers that it is worth £1 to use their card or they do not. As an optimiser, the way the offer is presented is irrelevant. However in reality such situations yield different results. Richard Thaler, professor of economics at the University of Chicago and recipient of the Nobel Prize in Economics, noticed a number of strange behaviours exhibited by market actors which suggested that they were not acting according the the rational choice model.[102] Thaler began looking into what biases and behaviours existed that caused market actors to depart from rational choice theory and this developed into what is now known as behavioural economics.[103] Much of the work in behavioural economics focuses on demonstrating which factors—ones that would normally be considered irrelevant from a rational choice point

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[96] *Id.* at 164.

[97] *Id.* at 162.

[98] AMOS TVERSKY & DANIEL KAHNEMAN, JUDGMENT UNDER UNCERTAINTY: HEURISTICS AND BIASES 185, 1124 (1974).

[99] *Id.*

[100] DANIEL KAHNEMAN & AMOS TVERSKY, CHOICES, VALUES, AND FRAMES 39, 341 (1984).

[101] *See* Amos Taversky & Daniel Kahneman, *Advances in Prospect Theory: Cumulative Representation of Uncertainty*, 5 J. RISK UNCERTAINTY 297, 310 (1992) ("[A] prospect will only be acceptable if the gain is at least twice as large as the loss.").

[102] RICHARD THALER, MISBEHAVING: THE MAKING OF BEHAVIOURAL ECONOMICS 20–21 (2016).

[103] *Id.* at 9.

of view—are in fact highly relevant in predicting market actors' behaviour.[104] This helps produce models of behaviour that are a more accurate reflection of reality. By producing more accurate models, it becomes possible to shape law and policy in such a way as to produce better results or from an economic perspective, more efficient results.[105] Such changes have been implemented in various jurisdictions [106] and are now commonly known as "nudges," a term coined by Sunstein and Thaler in their book of the same name.[107] Nudges do not restrict the freedom of an individual but rather "nudges" them toward the more efficient outcome, a term coined as libertarian paternalism.[108] This is extremely pertinent when there is a certain conduct that is regulated and the behaviour is linked to an inefficient outcome, such as market failure.

The application of such behavioural economics insights can explain various anomalies that exist within finance.[109] However, until now, such insights have not been considered in relation to takeover regulation and its effect on short-termist behaviour. In this paper, behavioural economics is used to identify an underlying bias for which rational choice models take no account in the market for corporate control. It is then used to posit a major reform of the Takeover Code to reframe the regulation so as to avoid this underlying bias and the failure that it causes.

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[104] *Id.* at 5–9.

[105] *See* Michael Hallsworth et al, *Behavioural Government: Using Behavioural Science To Improve How Governments Make Decisions*, THE BEHAV. INSIGHTS TEAM, (2018), https://38r8om2xjhhl25mw24492dir-wpengine.netdna-ssl.com/wp-content/uploads/2018/08/BIT-Behavioural-Government-Report-2018.pdf (using UK government financing to applying behavioural insights to policy making for U.K government); EXEC. ORDER NO. 13707, 80 FED. REG. 181 (Sept. 15, 2015) (executive order under Pres. Barrack Obama directing government to utilize behavioural sciences to help government better structure programs so that a more efficient utilization of government programs is realized).

[106] *The Behavioural Insights Team in the UK*, CENTRE FOR PUBLIC IMPACT (Mar. 31, 2016), https://www.centreforpublicimpact.org/case-study/behavioural-insights-team-in-the-uk/.

[107] *See* RICHARD THALER & CASS SUNSTEIN, NUDGE: IMPROVING DECISIONS ABOUT HEALTH, WEALTH, AND HAPPINESS (2009).

[108] *Id.*

[109] *See generally* Schlomo Benartzi & Richard Thaler, *Myopic Loss Aversion and the Equity Premium Puzzle*, 110 Q. J. ECON. 73 (1995) (using behaviourial sciences to explain why stocks have consistently outperformed bonds over the last century, and honing in on investors 'myopic loss aversion' as the reason for this trend); Uri Gneezy & Jan Potters, *An Experiment on Risk Taking and Evaluation Periods*, 112(2) THE Q. J. ECON. 631 (1997) (using myopic loss aversion as the behavioural hypotheses that justifies increases in investor risk aversion based upon the frequency of portfolio evaluation); Rajnish Mehra & Edward C. Prescott, *The Equity Premium: A Puzzle*, 15 J. OF MONETARY ECON. 145 (1985) (exploring the reason behind why equity returns far outstrip bond holding returns and its relation to investor risk aversion); Hersh Shefrin & Meir Statman, *The Disposition to Sell Winnders Too Early and Ride Losers Too Long; Theory and Evidence*, 40 J. FIN. 777 (1985) (exploring investor behavioural impulses, such as the aversion to loss realization, to understand why investors sell winning stocks too early or hold losing stocks too long); Richard Thaler et al, *The Effect of Myopia and Loss Aversion on Risk Taking: An Experimental Test*, 112(2) THE Q. J. ECON. 647 (testing expirimentally investor behaviour, namely myopic loss inversion to determine future investor actions). *See also* MICHELLE BADDELEY, BEHAVIOURAL ECONOMICS AND FINANCE (2013).

It is not necessary to discuss each and every bias that has been identified in the behavioural economics literature here.[110] For the purposes of this paper, it is only necessary is to consider the biases that will influence a shareholder's decision to either accept a takeover, sell into the market once it has been announced, or reject it in a way that is sub-optimal. This is because if there is some bias in the decision-making process that causes investor decisions to be sub-optimal, this can have a knock-on effect that undermines the board's ability to make profit maximising decisions and will have a negative impact on the efficiency and productivity of the economy.

The bias relevant here stems from the insight established by Kahneman and Tversky about the way humans perceive loss and gains. As previously stated, humans like gains only half as much as they hate losses; they are loss averse.[111] Consequently, the point in time when a shareholder makes a decision about whether to accept or reject takeover bids will impact the likelihood of his or her accepting. This is because, depending on whether or not an offer has been made, shareholders are likely to frame the potential outcomes differently; sometimes as losses and sometimes as gains.

This phenomenon, where people value what they have more than what they could have, even if it has the same nominal value, is called the endowment effect.[112] The endowment effect holds that people are more loss-averse in regard to what they already have than what they could have.[113] One is an out-of-pocket expense, and the other is regarded as an opportunity cost. Even if both the out-of-pocket expense and the opportunity cost are of the same nominal value, they are not treated equally by people. If an individual is given the chance to pay to avoid the risk of losing £100, they pay a higher value than they are willing to pay to obtain the chance to gain £100, even if the odds are the same. Mathematically, one may expect the price to be exactly the same, but in practice they will be valued differently because the first will be taken from one's endowment while the other is simply an opportunity cost.[114]

Now this has an impact when the information is applied to a situation where an investor is required to decide whether or not to accept an offer for their shares as part of a takeover bid. Consider the following

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[110] *See* David Hirshleifer, *Behavioural Finance,* 7 ANN. REV. FIN. ECON. 133 (2015) (containing a list of biases identified by a leading figure in behavioural finance).

[111] Daniel Kahneman & Amos Tversky, *Advances in prospect theory: Cumulative representation of uncertainty*, 5 J. RISK UNCERTAINTY 297 (1992).

[112] Daniel Kahneman, Jack L. Knetsch & Richard H. Thaler, *Anomalies: The Endowment Effect, Loss Aversion, and Status Quo Bias*, 5 J. ECON. PERSPECTIVES 193 (1991); RICHARD THALER, MISBEHAVING 12–19 (2016).

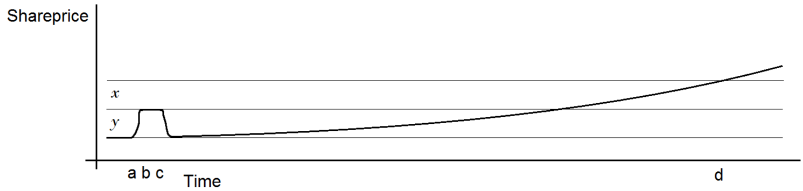
[113] *Id.*

[114] *Id.*

two scenarios by way of illustration: Person A has 500 shares in Cole Ltd. The shares generally trade around £1.00. A takeover offer is announced and each share increases in value to £1.25. Person A's shares used to be worth £500, but now due to the offer they are worth £625. Person A is informed by Cole Ltd.'s board that they believe the offer undervalues the company, and in five years, when a particular investment in widget production has been completed, the shares will be worth £1.50. Person A now has a choice to make: accept the offer or sell into the market and realize the value of the shares instantly, or in the alternative, hold on to the shares and trust that the investment will pay off as described by the board. The difficulty is that if the offer is not accepted, that will almost certainly have immediate consequences for the share price. With the takeover rejected, the share price is highly likely to drop down to around £1.00 once more since the takeover premium has now evaporated. Given this situation, Person A's decision can be described as follows:

| Action | Benefit | Likelihood | Loss | Likelihood |
|---|---|---|---|---|
| Sell | Obtain share value | Near certain | Potential future profit | Uncertain |
| Hold | Potential future profit | Uncertain | Immediate share price decrease | Near certain |

Obtaining the current value of the shares is all but certain if they sell. The loss, however, is contingent on the market behaving according to the prediction of Cole Ltd.'s board and so is less certain. But this is only part of the problem. Fundamental to this decision is that the increase in share value has already happened; Person A is in possession of £625 of shares. If the deal is rejected, the share price will return to its original position. Thus, if the deal is not completed, Person A will lose £125 in equity value, a loss that will be felt all the more keenly due to the innate dislike of loses above the like of gains. As a consequence, shareholders are likely to sell their shares to avoid losing their investment's (£0.25p/share) value, rather than hold on for a (£0.25) gain, not just because the short-term loss is more certain than the long-term gain, but because the shareholder is more averse to losing 25p than they are inclined towards gaining 25p.




*Graph 1*

Graph 1 and Graph 2 also illustrate this point. Starting with Graph 1, if Point a is when an offer is made, Point b is when a shareholder has to decide whether to accept an offer, Point c when a rejected bid is dropped, and Point d the point where the board predicts the share price will be if the company is not taken over. Then, even if the shareholder thinks the bid undervalues the company, his risk aversion will naturally incline him towards avoiding the drop in value of the shares (y) he already has, rather than pursuing a possible gain (x) in future, even if they are around the same level.

This is all further supported by research that suggests that market actors (and humans in general) have a "present bias."[115] This means that they are more likely to procrastinate immediate cost activities, such as paying more money into a pension scheme, and are more likely to preproperate activities that provide immediate benefits.[116] Further an awareness of one's propensity to make such flawed decisions can help reduce procrastination, but actually only intensifies preproperation.[117] Applying this to our current situation, this only serves to reinforce the point. If an investor holds shares in a company that is subject to a takeover announcement, when he is considering whether to accept an offer he will be subject to present bias. He can have an immediate payoff through the selling of his shares which will give him a bid premium, or he can hold his shares and benefit from a greater payoff when the company's investments come to fruition. In this calculation, he will value the immediate payoff with a positive bias when comparing it to a payoff later after holding the shares for an extended period of time.

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[115] Ted O'Donoghue & Matthew Rabin, *Doing It Now or Later*, 89 AM. ECON. REV. 103 (1999). *See also* Warren K. Bickel, Amy L. Odum & Gregory J. Madden, *Impulsivity and cigarette smoking: delay discounting in current, never, and ex-smokers*, 146 PSYCHOPHARMACOLOGY 447 (1999); Shane Frederick, George Loewenstein & Ted O'Donoghue, *Time Discounting and Time Preference: A Critical Review*, 40 J. ECON. LITERATURE 351 (2002); David Laibson, *Golden Eggs and Hyperbolic Discounting*, 112 Q. J. ECON. 443 (1997).

[116] To the author's understanding, prior to thorough economic investigation this was called impatience.

[117] Ted O'Donoghue & Matthew Rabin, *Doing It Now or Later*, 89 AM. ECON. REV. 103 (1999) 104–05, 109–12.

### *B. The solution*

The solution to this problem is to change the timing of the decision. This can be done by altering the Takeover Code to allow takeover defences to be approved by shareholders for a defined period of time in advance of takeover offers. Currently the rules state that:

> if the board of the offeree company has reason to believe that a bona fide offer might be imminent, the board must not, without the approval of the shareholders in general meeting:
>
> (a) take any action which may result in any offer or bona fide possible offer being frustrated or in shareholders being denied the opportunity to decide on its merits[118]

This rule means that defending a takeover is in fact allowed by the Takeover Code, but only with the approval of the shareholders to defend the company from that particular takeover in a general meeting. This hinders the practical ability to implement takeover defences, unless a majority of shareholders would vote to allow their company to frustrate a takeover. It is likely that those same shareholders would vote against the takeover offer itself, so if such approval was possible, it would also be unnecessary.[119] This situation can be changed if an additional clause is added to Rule 21.1:

> . . . unless the approval of the shareholders has been given for the board to take such action prior to an offer becoming imminent. Such approval must stipulate the following conditions:
>
> a) The duration of the permission to take such action (up to a renewable maximum of 10 years)
> b) The programme of investment for which the approval is requested
> c) The conditions upon which the approval becomes ineffective. In particular regarding an absolute or percentage change in share price or dividend or a deviation of such from a nominated sectoral benchmark

[118] The Panel on Takeovers and Mergers, *The Takeover Code*, PRACTICE STATEMENT NO 32, http://www.thetakeoverpanel.org.uk/wp-content/uploads/2008/11/code.pdf?v=8Jan2018.

[119] There is the theoretical possibility of takeover defences being approved prior to any imminent offer, which would be legitimate, but in reality such a defence is still likely to fall afoul of the rule because it would require some sort of action or inaction on behalf of the board to distinguish between takeovers the board considers desirable and those that are undesirable, for example, board dis/approval of the bid. This action would be considered frustrating action on behalf of the board rendering it once again a breach of the Code.

The effect of such a change would be substantial. It would make it possible for a board that has no imminent offers apparent to seek approval from shareholders to enter a period in which they are able to defend the company from takeovers, most likely through a poison pill style defence. The Rule would not allow a company to grant a perpetual permission to defend against takeovers. To prevent a board that had obtained approval from behaving in a way that is detrimental to the company, being comfortable in the knowledge that they are safe from a takeover, certain conditions will be required for the approval to remain effective. The most obvious of these are: that the share price should remain above a certain level, that dividends should do likewise, or that they should not deviate from a particular sectoral benchmark. The last possibility would be particularly useful as it would not invalidate the approval in times where, for reasons outside of the board's control, the sector is unable to maintain profits or expansion at prior levels. It would be up to the shareholders to decide which particular measure is suitable.

Implementing the above would allow boards to able to consider a long-term investment strategy and "pitch" it to shareholders. The pitch would include what the long-term aim would be, such as increasing market share, entering a new product or national market, developing a new technology, investing in more efficient plant machinery, and it would explain how long the program would be as well as any other relevant details that the board would be able to disclose without compromising the strategy itself. The pitch would set out the duration of the approval and the conditions upon which it would be invalidated, which will be referred to here as break clauses. Shareholders would then be able to decide whether they thought the program was worth giving up the ability sell the company to another. They would consider whether the program was viable and whether the board was trustworthy, honest, and capable of delivering what they were proposing. With this information they then decide whether to grant approval.

While an assessment of the feasibility of the proposed project, the reasonableness of the assumptions upon which it is based, and appropriate duration of such a project may be within the realms of calculation for major institutional shareholders and fund managers, it is clear that such an assessment may be beyond the ability of many other investors, not least retail investors. In order to counterbalance this situation it would also be necessary, when "pitching" a project to shareholders, for shareholders to appoint by vote an investment bank that investigates the proposal, produces a report on whether the projections, calculations, assumptions and time frame are reasonable, and gives an opinion on its overall merit. The bank would also advise on what sort of break clauses would be necessary and the appropriate benchmarks upon which to base them. It is of paramount importance that it is the shareholders who select the bank, in order to ensure there is an incentive to investigate fully and effectively to please shareholders. Selection of the bank by the board would incentivise the bank to investigate superficially and perhaps optimistically, in a way that could be argued to currently blight the audit market.[120] This would also provide the additional benefit of giving firms and shareholders the time to compare the market to get the best deal from banks and ensure that they have a reasonable period of time to evaluate the potential of the company carefully; two conditions that are absent when a bank is called upon to provide advice after a takeover has transpired.[121]

This leads to the question: why would shareholders give up their freedom to accept a takeover offer? If UK companies are focused on short-term results because they wish to protect their position and ergo their companies from being subject to takeovers, then UK shareholders are in fact being deprived of greater possible long-term returns, because the boards are not investing efficiently in order to generate the greatest possible gain in the long-term. By tying their own and fellow shareholders' hands from accepting a takeover offer, it liberates the board to focus on the long-term and generate greater profits. The next logical question is: if shareholders cannot perceive the long-term value of investments now (and consequently choose to sell shares into an offer rather than hold them), why would they choose to approve defensive measures, which would require them to depend on long-term value creation over and above short-term gains from potential takeovers? This can be answered by considering a table similar to the one above, but this time altered to reflect the scenario under the new non-frustration rule:

| Action | Benefit | Likelihood | Loss | Likelihood |
|---|---|---|---|---|
| Approve | Potential increased value | Uncertain | Potential future premium | Uncertain |
| Disapprove | Potential future premium | Uncertain | Potential increased value | Uncertain |

[120] Jonathan Ford, *A defective auditing market that makes 'lemons' of us all*, FIN. TIMES (Mar. 11, 2018), https://www.ft.com/content/fddde450-2521-11e8-b27e-cc62a39d57a0#comments-anchor.

[121] *See* Neil Collins, *Backing GKN management will be leap of faith for shareholders*, FIN. TIMES (Mar. 16, 2018) https://www.ft.com/content/48b715f8-2844-11e8-9274-2b13fccdc744 ("[T]he [target company], like a man with raging toothache, was not in a strong position to haggle over the fees and the idea that the final offer 'fundamentally undervalues' this venerable business . . . is mere takeover rhetoric from a board that can hardly know whether it does or not.").

Comparing the tables, the difference becomes obvious. First, when considering pre-approval for a takeover defence, the benefits and losses incurred by the shareholder are now on an equal footing; the increase in the company's value is uncertain, but the existence of a future takeover premium is uncertain also.[122] The magnitude of any future takeover premium is also uncertain. Instantly, there is a change in the dynamics of the decision, the shareholder now considers two possible future scenarios, both of which are uncertain. Further, the insights of behavioural economics explain why there is another significant consideration. For this, we can look back at our example of Cole Ltd. Under current rules,[123] Cole Ltd.'s share price increases from £1.00 to £1.25 when the offer is made and so, shareholders have £1.25 share value which if rejected, falls to £1.00. They are being asked whether they want to lose that same value by refusing the offer or potentially make greater gains in future. This is undesirable decision to give the investor because common sense shows that there is a greater dislike of losses as opposed to gains. This means they will be disproportionately concerned about losing the 25p value they already have thanks to the bid, as opposed to gaining 25p more at a later date.

Now contrast this situation to the decision under the new rule.[124] Under the new rule, Cole Ltd. has not yet undergone any offer. Its share price is around £1.00 and has been trading so for a while. Consequently, when the board asks for an eight-year approval of takeover defences for the purpose of investing in the latest plant machinery or expanding into a growing foreign market, the question posed to shareholders is whether they would rather seek to *gain* future profits through the company generating value or seek to *gain* a future premium through a takeover. There is no loss aversion because no actual loss will take place,[125] their decision will essentially be between two competing types of gain, both of which at the point of decision making are hypothetical. The only losses are indirect, and are opportunity costs. This contrasts strongly with the original scenario where seeking long term value generation would lead to an immediate loss from the shareholders' endowment as the share price drops reflecting the rejection of the takeover.

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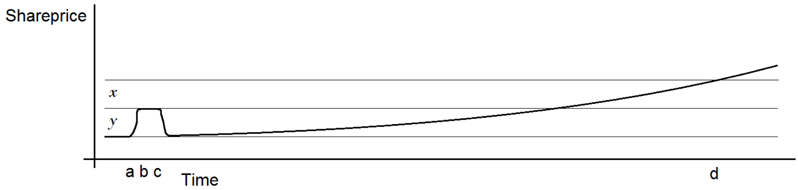
[122] The level of certainty could be drastically different, but this would be for the shareholder to consider in each individual circumstance. Where the chance of generating value is low and the chance of a takeover premium high, shareholders will naturally refuse to approve takeover defences. Likewise, when the chance of generating value is high and the chance of a takeover premium is low, the shareholders will be more likely to approve takeover defences.

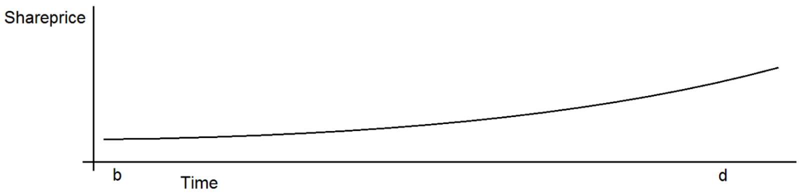
[123] *See infra* note 118 and accompanying text.

[124] *See supra* Section II.B.

[125] It is reasonable to expect that an approval of takeover defences will cause an opportunity loss that could be reflected in the share price, however, assuming that the shareholders have only approved takeover defences on the condition of investment that will lead to a commensurate increase in long term, value in these should balance out and the share price will remain largely stable.




*Graph 2*




*Graph 3*

Reconsidering the graph originally shown above as Graph 1 (now labelled Graph 2 for easy comparison), we can now compare it to the situation where takeover defences are prohibited and compare it to the situation where the new model described above has been implemented. In Graph 2, Point "a" is when an offer is made, Point "b" is when a shareholder has to decide whether to accept an offer, Point "c" is when a rejected bid is dropped, and Point "d" is where the board predicts the share price will be if the company is not taken over. As before, even if the shareholder thinks a bid undervalues the company, their risk aversion will naturally incline them towards avoiding the drop in value of the shares they already have rather than pursuing a possible gain in future, even if they are around the same level.

Now the situation can be contrasted by looking at Graph 3. In this situation, before any takeover is announced, the investor has to decide whether to allow takeover defences. This is marked at Point "b." Although when making the decision, the investor has to consider that at any point between Point "b" and "d," a takeover offer could be made which could allow them to benefit from an offer premium. Although this time, no endowment effect is possible because the bid premium has not yet come into existence. The shareholder has to decide on the current value of the shares compared to a hypothetical share premium that has not come into existence and consequently cannot exert an endowment effect upon the shareholder. A present bias would also have limited effect, since there would be no immediate benefit to selling the shares above and beyond the normal benefit of selling an investment. Here, all potential premiums would be in the future, thus exerting a weaker influence on the investor to overvalue immediate gains. By constraining these irrational biases, market actors should be able to behave more rationally and allow the market to function more efficiently.

This reform will also likely help the situation of the fund manager who is so concerned with their relative performance that they would sell into an offer that they believe undervalues the company. This is because the fund manager has to determine whether the firm in which they have invested their capital is able to deliver the higher returns that they are seeking to obtain during the proposed protected period. The fund manager does not need to worry about their relative performance come the next benchmarking period, because whether they approve takeover defences or not, there will be no immediate drastic change in the price of the shares in the same way that there would be if they held shares in a firm that had rejected a takeover offer. Therefore, whether the approval is given or not, it will not impact their position relative to competitor fund managers.

### *C. The effect of implementation on boards and shareholders*

There are a number of effects that would be expected from the implementation of this change in the takeover rules. Primarily, it should decrease the pressure on UK companies to focus on the short-term and allow them to look further into the horizon when making plans relating to investment and the use of capital generally. It will be likely to also generate other positive effects, which are especially desirable in light of the UK's productivity problem. Such a change in the Takeover Code will create an obvious incentive for boards to actively search out and find programs of investment that will give them a basis for seeking approval from shareholders to employ takeover defences. The motive behind this may be to protect their own position as best they can; as once they have received approval from their shareholders to use takeover defences, their own position is better secured. This may at first instance cause a number of investment programs to be presented and accepted that in time do not provide the fruits that were promised, but with time, the number of such programs should reduce and reach a low equilibrium. The reason for this is that once a program is agreed upon as a justification for approving takeover defences, it will be only a matter of time until the approval has run its course and the results are expected. Should those results not be secured, this will inevitably have a significant impact upon the trust the shareholders place in the board. Whether the board could not deliver because they deliberately misled shareholders or because, despite their best efforts, they simply could not deliver what they thought possible, it will mean that in the future, shareholders will be less likely to trust the verity of their statements as well as their competence to deliver results. This will likely mean the board will be less able to convince shareholders to permit further approvals for employing takeover defences and should an offer arise, shareholders will be far less likely to believe the board when they say that they should not take the offer. This then will provide its own disincentive to misuse the approval process by inventing unrealistic, overly optimistic or false programmes of investment. To rephrase the words of John Smith: "[i]t is not from the benevolence of the butcher, the brewer, or the baker, that we expect their plans of investment to be well considered and effective, but from their regard to their own interest."[126]

It is also worth noting that such a reform will have a limited effect on the openness of UK businesses to inward investment and beneficial takeovers. First, friendly takeovers would not be inhibited. Second, due to the temporary nature of the protection, shareholders will never be prevented from taking advantage of takeovers on a lasting basis. This is essential for two reasons: first, as described above, this ensures that company boards have an incentive only to pursue genuine investment programmes and, second, where firms persistently fail to innovate, it is essential these firms can be taken over and replaced with new management as expected within the market for corporate control.[127] This is made all the more important by the findings by Bloom and Van Reenen that low productivity is most pronounced in sectors where competition is weak.[128] Where there is little competition, it is all the more important that the threat of a new foreign entrant (for example, via acquiring an existing competitor) or the threat of a takeover drives the board of a company to continue to innovate and boost productivity. Notably however, with the proposed change, there should not be a drastic closing off of the market for corporate control within the UK, rather the timing and organisation of such takeovers will alter.

These measures would therefore change the nature of takeover decision-making. Simply by altering the timing of the shareholders' decision on whether to seek value generation or takeover premiums the rule change would put the shareholder into a position where they are likely to make more rational decisions. They would be comparing 'like with like' rather than long-term uncertain gains with almost certain short-term losses. As a consequence, whether the shareholder is a fund-manager or a retail investor their decision is more likely to be rational because they will balance the potential gains from either approving or disapproving takeover defences equally rather than being subject to, what is from an economic point of view, irrational loss aversion.

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[126] ADAM SMITH, THE WEALTH OF NATIONS 456 (Edwin Cannan ed., 1904) ("It is not from the benevolence of the butcher, the brewer, or the baker, that we expect our dinner, but from their regard to their own interest.").

[127] Henry G. Manne, *Mergers and the Market for Corporate Control*, 73 THE J. OF POL. ECON. 110 (1965).

[128] Nicholas Bloom & John Van Reenen, *Measuring and Explaining Management Practices Across Firms and Countries,* 122 Q. J. OF ECON. 1351 (2007). *See also* Andy Haldane, Chief Economist, Bank of Eng., Productivity Puzzles Speech at LSE (Mar. 20, 2017).

## CONCLUSION

It has been seen that the UK takeover regulation appears to cause a focus on short-term profits potentially damaging long-term investment, which appears to be harming research and development while also causing low productivity growth in UK businesses. A number of possible answers to this problem have been considered including government intervention, disenfranchising shareholders, and increasing the acceptance threshold for takeover acceptance. While each of these proposals have their own merits and de-merits, it has been argued that they are insufficient for the present purposes.

A new solution has been presented that harnesses the insights from behavioural economics. Under this new solution, prior to any takeover bid, a company's board has the opportunity to present to shareholders a program of investment that they believe would greatly increase the value of their company in the medium to long-term. If shareholders consider this program sufficiently convincing and sufficiently profitable, they can acquiesce to a period of time where the board can implement the investment program and where necessary, implement takeover defences so that they are not at risk of being subject to a takeover simply because they have chosen to implement a long-term profitability strategy.

It is argued that should such a policy be implemented, both research and development as well as investment will increase within UK companies and productivity will also increase in the medium to longer term after implementation. An increase in both investment and research and development would be likely to have a significant positive effect on productivity growth. As a result, this would help increase the standard of living, increase economic growth, and make the UK more competitive internationally. It would also ease the concerns of firms so that they would not feel it necessary to move to other jurisdictions where firms are more protected, and it would also do little to undermine the efficacy of the market for corporate control as a mechanism for maximising business efficiency.