TRUE LINKS: PRECURSORY LESSONS FROM GOLF FOR EFFECTIVE FINANCIAL BEHAVIOUR

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ARTICLE INFORMATION

Article History:
Submitted: 5 August 2016
Revision: 6 October 2016
Acceptance: 31 October 2016

Key words:

Financial behaviour, Golf performance, Financial decision-making, Financial planning, Financial coaching

ABSTRACT

This article presents the results from a preliminary study which finds there are three psychological errors common to golf and financial behaviour which are the cause of unfavourable outcomes, namely overoptimism, overconfidence and emotional judgements. To manage these errors, this study finds the same strategies used to improve golfing decisions could carry over into our understanding of effective financial behaviour. Further, linking the research of effective golf play with effective financial behaviour leverages upon a worldwide interest which we argue has the potential to provide a range of analogies and visual clues for financial education and financial planning.

Introduction

The play-off between the global financial crisis and recovery provided academia with an abundance of data and opportunity to argue a position for effective financial behaviour. Yet, despite the research output, certainty surrounding the best approach is still … in the rough. However, golf and money often go hand in hand, and this study shows the approaches employed by elite golfers are portable and useful solutions for effective financial behaviour. For instance, emerging from both the science of golf and financial behaviour, similar causes of unfavourable outcomes are shown to stem from psychological errors like overoptimism, overconfidence and emotional judgements. Conversely, emotional control and conscientious commitment to goal setting, planning, practise, evaluation, minimising risk and seeking quality advice are factors employed by elite golfers to improve performance. Hence, it is argued the learning from the science of golf and its portability to the science of effective financial behaviour are worthy of making the cut amongst a field of core financial research.

Motivating this study is a quote from the book, *The Physics of Ball Games*, by C.B. Daish, (1972, p. 3) which illuminates a link between golf and financial behaviour:

> As for the players themselves: hard-headed, quick-thinking men of affairs are to be seen daily on any golf course, bring to this pursuit a highly commendable zeal but, all too often, a singular lack of skill, and displaying, from time to time, such gross errors in decision-making which, were they to be carried over into their everyday business affairs, would be guaranteed to ruin them overnight.

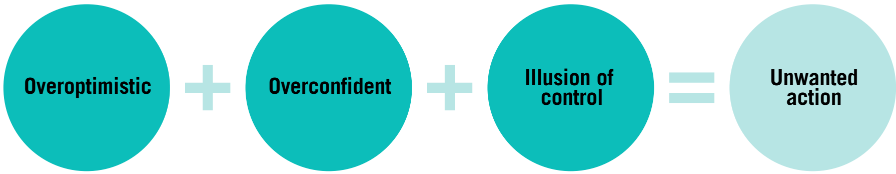
If this were true, could the learning from effective golf play be carried over into everyday financial decision-making and solve ineffective financial behaviour?

Literature review

Commencing with a review of the literature from the field of golf and financial behaviour, this article then presents the results of a high-end focus group of golf professionals, established finance academics, respected financial service professionals and career investors. Each has a strong interest in the science of golf and improvement of their game. Dimensions of good golf, including effective and proven strategies, are investigated and true links are made between these strategies and effective financial behaviour. This investigation provides a rich contribution to both fields of literature.

Figure 1 illustrates the three psychological errors of overoptimism, overconfidence, and emotional judgements, found commonly throughout financial behaviour literature as well as in this study to result in unfavourable financial outcomes, are also seen to explain poor golf performance.

Figure 1. Three psychological errors common to ineffective financial and golf behaviour



From the Financial Behaviour Perspective

Overoptimism is one of the best documented psychological errors (Montier, 2002) and found to occur when people overestimate the frequency of favourable outcomes and underestimate the frequency of unfavourable outcomes (Shefrin, 2007). For instance, this occurs when individuals overoptimistically believe their children are especially talented (Sharot, 2011). While optimism is important for driving hard work and the investment of time needed to improve performance, expectations and outcomes, extreme optimists display financial habits and behaviour not considered prudent (Shefrin, 2005) and it can affect financial decisions (Ashton and Roberts, 2005; Coval and Thakor, 2005; Heaton, 2002; Puri and Robinson, 2007; Shefrin, 2005).

Overconfidence happens when people are convinced they are better than they actually are (Shefrin, 2007). Psychologists show that overconfidence causes people to overestimate their knowledge, underestimate the risks, exaggerate their ability to control events, and likely to take credit for positive financial outcomes and blame others or bad luck for negative financial outcomes (Barber and Odean, 2001; Einhorn, 1980; Fischhoff, Slovic and Lichtenstein, 1977; Griffin and Tversky, 1992; Malmendier and Tate, 2005; Nofsinger, 2001; Shefrin, 2007; Yates, 1990). This is a common reaction on the golf course too (Vara, 2007).

Emotional judgements, referred to as an illusion of control by Montier (2007), relates to an individual's belief in their influence over the outcome of uncontrollable events. Presson and Benassi (1996) conclude the illusion of control is more likely to occur when many choices are available and there has been earlier success at the task. Similarly the hot-hand fallacy (term arising from basketball) shows that basketball players and fans believe that a player has a greater chance of hitting a shot if the previous shot was a hit, than if the previous shot was a miss (Gilovich, Valone and Tversky, 1985). Also linked to the illusion of control is the illusion of knowledge (Montier, 2007). The illusion of knowledge Montier (2007) describes as thinking you know more than everyone else. The illusion of knowledge, as with the illusion of control, Montier (2007) argues will lead to overoptimistic and overconfident behaviour.

From the Golf Behaviour Perspective

The research on golf performance presents a range of useful comparisons. For instance, mental fitness and managing one's thinking has been studied in relation to golfers and their management of overoptimism and overconfidence (Baker, Horton and Pearce, 2005; Binsch *et al.*, 2009). Behavioural factors are found by Baker, Horton and Pearce (2005) to be equally important for good golf once the technical aspects of golf are known. In the same vein, Hill *et al.* (2011) found the behavioural decisions made on the course determine good golfers. Examples of strategic decisions made on the course are described by Ericsson (2001), who found professional golfers manage their decision-making by considering not only the immediate shot in play but also the previously played strokes on each hole and how their previous decision impacted on their score. As with financial behaviour, these insights show how dynamic and layered the psychological aspects of golf are.

Studies such as Crust and Keegan (2010) found women golfers manage overconfidence and overoptimism differently to male golfers with women showing more adversity to risk on the course than the men. However, high performance golfers like Tiger Woods may adopt risk-averse behaviours on the course to avoid negative thinking after taking a risky shot that didn't pay off (Forsyth, 2003; Pope and Schweitzer, 2011). Likewise, managing the illusion of control has been studied in relation to maintaining greater levels of golf skill. For instance, Hayslip, *et al.* (2010b) found the greater use and management of one's thinking reflected in greater levels of golf skill.

In the same vein market commentators have drawn links between how behaviour in golf translates to behaviour in the boardroom. Professional golfers and elite business people agree the problem-solving, coping skills and ethical conduct demonstrated on the golf course are reflective of how an individual handles a business situation (Vara, 2007). Many professional golfers such as Greg Norman, Bobby Jones and Brian Davis have reported rule infringements on themselves during competition and received penalties, demonstrating the ethical conventions of golf (Rubenstein, 2010). Experienced and novice golfers are likewise wary in business dealings of those who do not follow these ethical conventions on the course. Warner (2008) says that clients and associates of Bernie Madoff would have benefited from investigating his golf scores—they were too consistent to be believed.

Additionally, Melton and Zorn (2000) investigated the risk-taking behaviour of professional players on the PGA tour to see if the ranked-order prize money influences performance. They hypothesised, using tournament theory, that observations in golfer behaviour may translate to behaviour for managerial pay. They found that golfers who were lower down in the order took greater risks in order to catch up, encouraged by the asymmetrical prize structure. This was evidenced by a greater cross-sectional variation in scores than those in the top quartile. While they recommended that further research be undertaken, they stated their results were similar to that of Brown, Harlow and Starks (1996) who found that fund managers in losing funds take on more risk than winners.

Similarities in Corrective Approaches: Golf vs. Financial Behavioural Contexts

Corrective approaches such as goalsetting, a willingness to receive a critical evaluation of their performance, the propensity to plan for the future and a conscientious commitment to practice and improve their game are adopted by elite golfers and, in turn, counter the influence of overoptimism, overconfidence and emotional judgement in their game (Cohen, Tenenbaum and English, 2006; McCaffrey and Orlick, 1989). The golf coach can play an important role in helping the player with techniques and tools to control emotions and achieve psychological improvements, confidence and self-efficacy (Cohen, Tenenbaum and English, 2006; Dunn, 2009; Hayslip *et al.*, 2010a; Hellstrom, 2009). Good coaches have been shown to provide learning opportunities that help to strengthen the mental control over emotions and develop effective coping strategies (Hellstrom, 2009; Weinberg, Butt and Culp, 2011).

Similarly, financial education is found by Joo and Grable (2004) to be a consistent factor amongst those who practise desirable financial behaviour, and were more aware of risk and more capable of making strategic financial decisions. Knutsen and Cameron (2012) contend that a good financial coach will raise efficacy expectations and are more likely to be the major determinant of people's better financial choices.

An overview of concepts emerging from this literature is summarised in Table 1. The links between the two studies of golf and financial behaviour were found to have merit and warranted further exploration. Also shown in Table 1 are themes emerging from the data and presented with the results.

Table 1. Comparison of concepts and themes emerging from the literature and focus group data

Concepts Emerging from the Literature		**Themes Emerging from the Focus Group**	
Psychological Errors Affecting Financial Decisions	**Error Management Strategies Employed by Elite Golfers**	**Observations of Error Management for Better Golf**	**Error Management - Golf vs. Financial Behaviour**
Overoptimism Over- or underestimate the frequency of favourable and/ or unfavourable outcomes. (Ashton and Roberts, 2005; Sharot, 2011; Shefrin, 2007).	*Managing overoptimism* Develop a willingness to be coached. Strengthen mental control by conscientiously committing to improvement (Cohen *et al.*, 2006; Hayslip *et al.*, 2010a; Hellstrom, 2009).	*Managing overoptimism* Quality coaching can get you over the water and nearer the target. Commit to pre and post shot routines rather than dwelling on the leaderboard.	*Managing overoptimism* As with golf, if you have a bad experience, you learn and progress. To reach the pin, with golf and financial planning, quality advice is critical.

Table 1. continued

Concepts Emerging from the Literature		Themes Emerging from the Focus Group	
Psychological Errors Affecting Financial Decisions	**Error Management Strategies Employed by Elite Golfers**	**Observations of Error Management for Better Golf**	**Error Management - Golf vs. Financial Behaviour**
Overconfidence Belief they are better than they actually are, exaggerate their ability to control events and blame. (Shefrin, 2007; Barber and Odean, 2001; Fischhoff, Slovic and Lichtenstein *et al.*, 1977).	*Managing overconfidence* Manage one's thinking by planning to reach the target. Consider immediate shot in play and impact of decisions from previous play. (Baker, Horton and Pearce *et al.*, 2005; Binsch *et al.*, 2009; Hill *et al.*, 2011).	*Managing overconfidence* Maintain focus on target rather than focusing on trying to avoid an action. Manage thinking by planning to minimise bad shots and analysis of facts to play effectively.	*Managing overconfidence* Like the successful, wealthy, good golfers know, bad golf cannot be rectified with blame. Instead, operating effectively requires careful analysis of fact prior to making financial decisions.
Emotional judgements Create an illusion of control, believe to have influence over uncontrollable events built from earlier successes. (Montier, 2007; Presson and Benassi, 1996).	*Managing emotional judgement* Adopt risk-averse behaviours to manage the impact of negative thinking created from prior unwanted outcome. (Forsyth, 2003: Pope and Schweitzer, 2011).	*Managing emotional judgement* Top golfers focus on one shot at a time. To minimise loss, good golfers are more likely to play safe, leaving the ball short of the hole to avoid difficult follow-up putts	*Managing emotional judgement* People forget about probabilities. Like golf, better to play safe and putt for par.

Method

This exploration used a qualitative method to draw out the initial constructs and to retain a good science approach, Guba and Lincoln's (1981) factors of research rigour, namely applicability and truth value were used to validate the data. For instance regarding applicability, a focus group session consisting of 12 participants was formed. The participants included: three golf coaching professionals from a golf coaching centre, each with over 40 years golfing experience; six academics with golf experience and/or research expertise in finance, financial planning and the biomechanics of golf; and three golf players with separate qualifications in financial planning, sports massage and accounting. The participant selection was underpinned by Guba and Lincoln's (1981) argument that subject selection should be driven by their ability to represent a slice of the world being studied. Hence, the mix of participants and their ability to articulate their experiences were considered applicable to inform the study.

Regarding truth value in the data, this status is attained when those people, having the experience, immediately recognise the content when presented with it and the subject's validation of the interpretation provides an authentic layer of credibility against which the qualitative data can be evaluated (Guba and Lincoln, 1981). Consequently, drawn from the literature, semi-structured questions (as shown in Table 2) were created and posed to the participants. Then, over three hours, the questions were used to explore the participants' experiences with golf, the potential links to effective financial behaviour and whether their learning from golf could carry over into better financial behaviour. The responses were recorded and transcribed. To apply the truth value test, a transcript of the focus group discussion was forwarded within 12 days following the event and the participants verified the accuracy of the data.

A thematic analysis followed whereby themes emerging from the data were filtered using a matrix which qualitative researchers Corbin and Strauss (1990) consider useful for data ordering and capturing qualitative concepts. The themes were then analysed in light of the literature.

Table 2. Focus Group Question Guide

Theme	Questions
General Lessons from Golf	How do the dimensions of good golf apply to effective financial behaviour? What lessons have you learned from your golf game: a) technically b) behaviourally c) by observing professionals versus amateurs on the course versus at the driving range, d) your game strategy compared to professionals?
Errors	What are the common mistakes/pitfalls that players make/fall into trying to improve their game? What common mistakes/pitfalls have you made trying to improve your game?
Strategies	What strategies [and outcomes] have you attempted to correct your game? How successful were the strategies? From this experience [above] how would you now describe the dimensions of good golf?
Coaching	How important has the role of your golf coach been in terms of: a) changing misconceptions about your approach, b) correcting your approach and/or knowing what to correct, and c) developing your self-efficacy about making good golf decisions?
Golf vs. financial behaviour	Understanding that golf and financial success are both target games, how do: a) the mistakes/pitfalls of golf compare to financial behaviour, b) the strategies to correct the golf game compare to corrections needed for effective financial behaviour, and c) the dimensions of good golf compare to the dimensions of effective financial behaviour?
Ethics	From your observations of golf ethics, particularly of those that have embedded it into their game and those that haven't, would this be indicative of their ethical financial behaviour?

Results

The study found the learning from similar behaviour, strategic thinking and decision-making employed in good golf play could carry over into our understanding of effective financial behaviour. In doing so, ineffective financial behaviour stemming from psychological errors such as overconfidence, overoptimism and emotional judgements could be managed in the same manner as is done with good golf.

Strategically, the professional golf participants concurred with the studies by Binsch *et al.*, (2009) and found that, when playing, they perform better when their focus is on the target, rather than focusing on trying to avoid an action. For instance, one confirmed: “Professional golfers have a strategy” and, “They are looking at where they aim”. Another stated: “Reaching the target is a function of minimising bad shots”. Similarly, the financial behavioural literature suggests that, while intuition and experience are valuable, when making financial decisions there is no substitution for careful analysis of facts to operate effectively (Shefrin, 2007; Slovic *et al.*, 2002).

Behaviourally the observations of the academics with an interest in golf and financial behaviour aligned with Shiller (2000), finding that unfavourable financial outcomes were often the result of emotional judgements. As one academic related: “The first time I played golf, I parred the first hole, then, over-optimistically expected the same result thereafter. But, emotion and stubbornness set in and it took three years to get another par”. To control their emotions, the professional golf participants said: “Top golfers focus on one shot at a time and commit to pre/post shot routines rather than dwelling on the leaderboard”. Linking between golf and financial behaviour research, one participant proposed that: “A person’s behaviour on the golf course is indicative of behaviour in everyday life (including their financial life). As with golf, if you have a bad hole, you learn, then clear it from your mind, and get to the next hole.” The golf coaches confirmed: “Like the successful, wealthy, good players know that good golf is rarely about luck and bad golf cannot be rectified with blame”.

The decisions made by professional golfers when putting were found to offer insightful comparisons. For instance, an analysis of the risk-taking behaviour of professionals playing tournament golf found they are less accurate when putting to achieve a ‘birdie’ or an ‘eagle’ (one or two under par, respectively) than when attempting shots for par or over (Pope and Schweitzer, 2011). One participant contended that less accuracy also occurs with investment decision-making when people are convinced they are better than they actually are, arguing that: “People forget about probabilities” and, “They overestimate their knowledge, underestimate the risks and exaggerate their ability to control events.” In response, the professional golf coaching participants stated that good golfers hit birdie putts less hard, to avoid a loss, compared to how they hit par putts. In doing so, they are more likely to play it safe by leaving them short of the hole in order to avoid difficult follow-up putts. Collectively, the group agreed that playing safe applies to both golf and financial behaviour and, like golf, while intuition and experience are valuable, when making financial decisions there is no substitution for careful analysis of facts to operate effectively.

Other insightful comparisons were made about the importance of a good coach and, in relation to both golf and financial objectives, quality advice was said to be critical. One professional golf coach remembered a student of his who kept hitting the ball into the water: “When I recommended they use a different club, they hit the ball over the water and nearer their target”. In response, the lecturer in financial planning confirmed, without good advice, there is a tendency to repeat the same financial errors over and over again. The financial planning lecturer said she has both a coach for golf and for financial planning: “To have more time for golf I need a good financial plan. To get closer to the pin, both with golf and my financial planning, I have benefited from quality recommendations from skilled advisers”.

Discussion

These preliminary findings offer salient links between the behaviour, strategies and decision-making employed in good golf and effective financial behaviour. As with the comparison of literature, the group made links between golf and financial decisions in relation to each of the three psychological errors: overconfidence, overoptimism and emotional judgement. The group also found the strategic thinking used by elite golfers to manage these errors could also apply to correcting ineffective financial behaviour. The strategies considered useful are summarised in Table 1 and interpreted as follows:

Overoptimism with elite golfers is managed by being willing to receive quality advice from an experienced coach and being coached on pre and post shot routines rather than focusing on the leaderboard. Coaching a player to select a more appropriate club to counter the risks associated with certain hazards on the course is, we suggest, a useful analogy in both financial education and financial planning contexts. Firstly, in relating the importance of selecting the most appropriate investment to manage the risks encountered in the market. Secondly, in urging the benefits of quality advice from an adviser whose experienced guidance is more effective than relying on overoptimistic financial decision-making. Further, lessons about consistent pre and post shot routines rather than focusing on a changing leaderboard, we suggest, are useful analogies relating to the importance of good, consistent financial set-up and consistent review of financial planning as opposed to blindly following a popular or temporary trend.

Overconfidence with elite golfers is managed by analysis and planning to reach their target rather than falling prey to overconfident thinking. This lesson from elite golfers offers a meaningful analogy relating to the similar attention needed to build confidence in effective financial decision-making. Hence, we suggest such an analogy is a meaningful, visual clue which could be used in financial education and financial planning contexts to explain the importance of planning and analysis to prevent being derailed by uninformed financial decision-making.

Emotional judgements are prevented among elite golfers by risk-averse decisions such as playing safe and avoiding difficult follow-up shots. This is most noticeable when the risk of unwanted action is high. We suggest this lesson from elite golf provides a meaningful analogy to reinforce the need to remember the risk of probabilities with financial decision-making. Hence, in financial education and financial planning contexts the same visual clue could be used to reinforce the value of investing safe when the risk is high and probabilities uncertain.

Conclusion

The play-off between the global financial crisis and recovery provided academia with an abundance of opportunity to argue a position for effective financial behaviour. Yet, the psychological errors such as overoptimism, overconfidence and emotional judgement continue to derail financial behaviour. The closing comment from one professional golf participant in this study captured the conclusions drawn by the research team on the true links between golf and financial behaviour. Like good financial behaviour, he concluded: “Good golf is about minimising bad shots, not about hitting great shots. It’s about getting the best you can from what you’ve got, rather than risking everything to win”.

In terms of practical application inside and outside academia, the interest in golf and financial performance is worldwide. While it is acknowledged these observations are made from only a preliminary investigation, we argue there are avenues for further research into a practical application of approaches adopted by better golfers to counter the psychological errors of overoptimism, overconfidence and emotional judgement that derail financial behaviours.

Importantly, it is anticipated that further research linking the strategies that are employed in effective golf play with effective financial behaviour leverages upon a worldwide interest which we argue has the potential to provide a range of analogies and visual clues for financial education and financial planning. For example, empirical analysis in the financial education and financial planning contexts could test, firstly, whether a) effective financial coaching in relation to selecting the most appropriate investment to reach a financial target and/or pre and post financial decision-making routines are counter strategies for overoptimistic financial behaviour, b) financial analysis and planning are counter strategies to overconfident financial behaviours and c) risk-averse decisions are counter strategies for preventing the impact of emotional judgement. Secondly, whether golfing analogies, such as those highlighted in this study, do provide effective visual clues in the same financial education and financial planning contexts to reinforce the usefulness of these strategies to counter the psychological errors found to cause ineffective financial behaviour.

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