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Emotional finance: investment and the unconscious[†]

Richard Taffler

Warwick Business School, University of Warwick, Coventry, UK

ABSTRACT

Unconscious mental processes are ubiquitous. However, little attention has been paid in the finance literature to date to how people's unconscious fantasies, needs and desires help drive their investment decisions, and markets more generally. Emotional finance which is informed by the psychoanalytic understanding of the human mind sets out to explore such issues directly. This paper first describes the underlying theory and then examines some of its potential insights and empirical applications. How emotional finance more generally may help explain asset pricing bubbles and the Global Financial Crisis is also discussed, as well as the paradox the asset management industry represents. Recognising that investors are often driven by not-always conscious emotions of excitement, anxiety and denial, and markets by parallel collusive group-wide processes, this paper concludes by suggesting that the key role unconscious mental processes play in all human activity is worthy of greater attention in finance. Appropriate research methodologies and the way forward in terms of future work are also outlined.

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1. Introduction

Most mental activity occurs outside of conscious awareness (e.g. Bargh and Chartrand 1999; Turnbull and Solms 2007). In fact, activities of the unconscious mind precede their experience, explanation and ownership by the conscious mind, i.e. 'action precedes reflection' (Bargh and Morsella 2008). Unconscious psychic processes are central in the way we deal with the world; conscious mental activity is metaphorically only the tip of the iceberg. Nonetheless, the role people's unconscious needs, fantasies and drives play in their financial decisions and how associated group processes can move markets has been ignored by financial researchers to date.

Traditional finance theory has its roots in the axioms of von Neumann and Morgenstern (1953) and Savage (1954) of neoclassical economic theory (Rubinstein 2001). Economic decision makers are 'rational': they make unbiased forecasts about the future, are perfect information processors and maximise expected utility using subjective probability distributions which are unbiased. Although clearly this assumption of *homo economicus* is false, until recently the central paradigms of finance were 'all derived from investor rationality' (Subrahmanyam 2007, 12). However, traditional finance is not very helpful in answering such questions as why individual investors trade, how they perform and construct their portfolios and why stock returns are not only driven by risk (e.g. Subrahmanyam 2007), nor in explaining asset pricing bubbles (e.g. O'Hara 2008).

CONTACT Richard Taffler Richard.Taffler@wbs.ac.uk

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Behavioural finance, which has developed in response to the increasing number of stock market anomalies not explained by traditional asset pricing models (e.g. Shiller 2003), recognises that financial decision makers are imperfect, make particular types of mistake, are prone to judgmental errors and are poor intuitive statisticians. In contrast to traditional finance, investors are not 'rational' but 'normal' human beings (e.g. Statman 1999).

Much of the corpus of knowledge which constitutes behavioural finance is derived from the theoretical models of financial economists designed to explain different 'irrational' investor behaviours believed to impact on market pricing predicated on the operation of particular cognitive biases. However, as Hirshleifer (2015, 151) points out, 'given the large grab bag of possible behavioral biases to choose from, building a financial model by assuming some behavior that seems plausible, or even by invoking a documented psychological bias, is not always compelling'.

The underlying intellectual foundation of behavioural finance is the experimental work of the cognitive psychologists starting with, e.g. Tversky and Kahneman (1974). Laboratory experiments are used to demonstrate how we deviate from traditional rational choice norms. Typically, however, these involve naive high school and undergraduate student subjects and problems of a highly abstract and context free nature (e.g. Kahneman, Slovic, and Tversky 1982; Gilovich, Griffin, and Kahneman 2002; Kahneman 2011). As such their ecological validity for our purposes is somewhat limited.

Behavioural finance texts and surveys typically provide long lists of the heuristics and biases to which we are prone. For example, Hirshleifer (2015) describes more than 30 such sources of judgment and decision bias including representativeness, affect, overconfidence, overoptimism, self-enhancing (attribution) bias, framing, loss aversion and the endowment effect, and how they are expected to impact investor behaviour. (For earlier surveys, see e.g. Barberis and Thaler 2005; Subrahmanyam 2007; Shefrin 2008, 2009a; Baker and Wurgler 2013 for behavioural corporate finance, as well as Kahneman 2011 for a more general survey.)

The implicit assumption in much of the behavioural finance literature is that the 'cognitive errors' made by participants in laboratory-type situations are equally replicated in complex real-world market environments with skilled and knowledgeable participants and real outcomes and costs (e.g. Shiller 2003; Butorovic and Tasic 2015). In fact, it is very difficult to test behavioural finance models directly in practice *inter alia* because of the 'potentially boundless set of psychological biases underlying the behavioral explanations for security price behavior [which] can lead to over-fitting of theories to data' (Chan, Frankel, and Kothari 2004, 3). Clearly, there is the need in finance to be able to distinguish between stories told *ex post* in an attempt to explain market anomalies, even if these have some superficial face value plausibility because of their representativeness, and how investors actually make decisions (e.g. Barberis and Thaler 2005, 64–65).

Importantly, behavioural finance, in common with traditional finance, still views economic rationality as the norm to be aspired to (Frankfurter and McGoun 2002). We *ought* to be 'rational' even if currently we are not. As Butorovic and Tasic (2015) point out, although Kahneman (2011) sees his work as challenging 'the dogmatic assumption . . . that the human mind is rational and logical' (9), he still uses the framework of neoclassical economics as an ideal, deviations from which are labelled irrational. The belief is that despite our human frailties we can learn to be better investors (i.e. more rational) by acknowledging and correcting for the judgmental errors to which we are prone. As Shefrin (2002) argues, by understanding behavioural finance financial decision makers can 'learn to recognise their own mistakes and those of others, understand the reasons for mistakes, and avoid mistakes' (3). (Other behavioural finance texts have a similar message, e.g. Nofsinger 2014, 126–132; Ackert and Deaves 2010, ch. 18, and in the *Debiasing for Better Decisions* boxes at the end of every chapter of Shefrin 2007.) The only problem is that such debiasing is quite difficult to do in practice (e.g. Menkhoff and Nikiforow 2009).

A key limitation of the current state of the art in behavioural finance, however, is that, as Hirshleifer (2015) points out, it predominantly focuses on cognitive biases and judgmental errors at the individual level with social and group processes ignored. Similarly, it largely eschews the role of feelings or 'affective short-circuiting' involving such emotions as excitement, panic, fear and anger. (The terms feelings, emotions and affects are used synonymously in this paper as common practice in psychoanalytic theory.)

Importantly for the purposes of this paper, behavioural finance (as of course does traditional finance) ignores the key role unconscious fantasy and group psychodynamic processes play in helping explain individual investor and market behaviour, as equally they are ignored in the work of cognitive psychologists. (For example, the word 'unconscious' appears only once in both of Kahneman's two articles based on his 2002 Swedish National Bank

(Nobel Memorial) Prize in Economic Sciences lecture [Kahneman 2003a, 2003b], and then only in a referenced book title. Similarly, there is no reference to the unconscious whatsoever in the index to Kahneman 2011.) This paper argues that formally acknowledging the role the unconscious plays in all investment decision-making and market behaviour will significantly complement the insights of traditional and behavioural finance.

Emotional finance does not recognise economic rationality as a meaningful description of how the unconscious mind works or ought to work. Drawing on the psychoanalytic understanding of the human psyche or 'inner world' which is based on well over 100 years of rich theoretical development and clinical experience starting with the work of Sigmund Freud, emotional finance directly explores how unconscious processes help drive both individual financial decisions and market activity.

Investment market outcomes are inherently unpredictable and such uncertainty leads to emotional responses of both a neurological and psychological nature. The important role of *illusion* in investment, which from a psychoanalytic perspective is viewed as any belief heavily influenced by *wish fulfilment* and the distortion of reality (Auchincloss and Samberg 2012, 110), is explicitly recognised. People unconsciously *feel* what they want to be true, rather than what actually *is*. The *psychic*, or subjective, *reality*, of the inner world, the world of unconscious fantasies and wishes, and how this is reflected in market psychodynamics, is very different to the material world of *external reality*, the actual *facts* of the matter, which is what finance traditionally deals with.

Modern research in neuropsychology is increasingly confirming Freud's original insights into the workings of the human psyche and the formative role early infant relationships and experiences play in adult mental processes (e.g. Kandel 1999; Solms 2004; Bechara and Damasio 2005; Turnbull and Solms 2007; Wolozin and Wolozin 2007; Tuckett 2011, 59–62). As Kandel (1999, 505), the 2000 Nobel Laureate psychiatrist and neuroscientist, points out, 'psychoanalysis still represents the most coherent and intellectually satisfying view of the mind'. In parallel, Bargh and Morsella (2008) provide direct evidence that 'Freud's model of the unconscious as the primary guiding influence over daily life, even today, is more specific and detailed than any to be found in contemporary cognitive or social psychology' (73). Emotional finance theory explicitly draws on the psychoanalytic understanding of the human mind and dynamic mental states to describe how unconscious processes drive investment decisions, and are an integral part of financial decision-making more generally. Although this paper focuses specifically on issues relating to investor and market behaviour, emotional finance has equal application at the corporate level (e.g. Fairchild 2014).

The next section of this paper describes the current state of development in emotional finance. Section 3 then applies this corpus of theory in a number of areas where traditional and behavioural financial models can be augmented to illustrate the potential contribution of this new financial paradigm. Specifically, the unconscious meaning of 'risk' which is visceral and related to the anxiety associated with uncertainty in Knight (1921) terms rather than rational calculus or measurement and its implications are explored. The paper also examines the vital role trust plays in all investor engagements as well as the potential role unconscious fantasy and group psychodynamics might play in helping to explain stock market anomalies. The psychopathology of gambling and its potential relationship with aspects of investing is also considered. Finally, this section explores the unconscious associations of what retirement means and how this might contribute to a richer understanding of inadequate saving provision.

Adopting a broader perspective Section 4 explores the potential contribution emotional finance can make in explaining asset pricing bubbles and related market phenomena, including the Global Financial Crisis. As Hirshleifer (2015) points out in his conclusion, existing economic and behavioural finance theories have great difficulty in doing this in any coherent way because of their lack of analysis of social interactions (in our terms group psychodynamic processes). Section 5 examines the paradox the nature of the fund management industry presents. Taking an emotional finance perspective it highlights how the real contribution professional asset managers make is quite different to the way this is conventionally viewed, even if not 'rational'. The final discussion and conclusion section first summarises the paper and then outlines the way forward in emotional finance in terms of its empirical application and appropriate methodological approaches. The results of preliminary work which show considerable promise are also described. The paper ends by suggesting that the key role unconscious fantasy plays in investment should be formally acknowledged if we want to understand and predict investor and market behaviour in a more holistic way. In fact, we might speculate on whether the pursuit of the 'rational' which is, in some sense, predictable, may be serving on one level as a psychic defence against the reality that

ultimately the future is uncontrollable, with the associated anxiety and potential unconscious panic to which this inevitably leads.

Although this paper illustrates many of the potential contributions emotional finance can make directly to the finance discipline, it must be recognised that this new paradigm is very much in a nascent state and we are only at the beginnings of developing a research agenda. A comparison can be drawn with behavioural finance in its early years (arguably the first mainstream behavioural finance paper in the *Journal of Finance* was that of Slovic 1972). Despite well over 40 years of work, even now, as we have seen, and as Barberis and Thaler (2005) point out, much is still contentious in behavioural finance and a lot more empirical scrutiny is required. In fact, reflecting this they conclude their survey (65) with two predictions: 'First, we will find that most of our theories, both rational and behavioral are wrong. Second, substantially better theories will emerge.' Emotional finance is only at the starting point of its development as a coherent discipline.

2. Emotional finance theory

Whereas psychoanalysis originated in the clinical setting, psychoanalytic theory is also an important ontology, *inter alia*, in the humanities', social science and management literatures as it 'represents arguably the most advanced and compelling conception of human subjectivity that any theoretical approach has to offer' (Fotaki, Long, and Schwartz 2012, 1105). This section seeks to outline in non-technical terms for a finance audience the emerging theoretical framework underpinning emotional finance. This draws on the psychoanalytic understanding of the human psyche and unconscious mental states and their group correlates. This theory is then used in subsequent sections to explore a range of areas in finance where traditional and behavioural finance appear incomplete in being able to explain investor and market behaviours.

2.1. Ambivalence and unconscious conflict

Psychoanalysis views emotions as ultimately being of two types: *pleasurable* (exciting) or *unpleasurable* (painful, anxiety generating or loss provoking) (Freud 1911). Mental functioning reflects the outcome of an ongoing and never fully resolved struggle between the *pleasure principle* and the *reality principle*, the capacity to sense reality as it really is, however painful, rather than how people might wish it to be. As Freud (1908, 144) points out: 'But whosoever understands the human mind knows that hardly anything is harder for a man than to give up a pleasure which he has once experienced.'

Investment decisions create feelings of both *excitement* (the pleasurable imagined wish fulfilling [often unconscious] fantasy of actual or imagined future gains) and *anxiety* (over the pain or unpleasure of actual or potential future loss). The universal human emotion of *anxiety*, the not-always consciously experienced apprehension and anticipation of danger, which plays a central role in psychoanalytic theory (Auchincloss and Samberg 2012, 18–20), can be viewed as the *prototypical emotion* in investor behaviour. In a person's unconscious, there is no such thing as a little anxiety, anxiety is experienced as total. (*Inter alia*, see Tuckett and Taffler (2012) and Tuckett, Elliott Smith, and Nyman (2014) for empirical confirmation of the key role this dynamic process plays in investment. Kuhnen and Knutson (2011) describe some of the underlying neurophysiology.)

The process of investing involves investors as individuals or part of a group entering into an emotional attachment, whether conscious or not, with something, a stock or other asset, which can lead to both gain and pain. The investor becomes dependent on its future price, something which is inherently uncertain. There is the wish and hope the stock will go up, which is pleasurable or exciting, but, on the other hand, it can very easily let the investor down, the thought of which is unpleasurable and anxiety generating. Importantly, since both pleasurable and unpleasurable feelings are generated at the same time, this leads to subjectively painful emotional conflict or *ambivalence.* This concept is used in psychoanalysis to describe the simultaneous existence of, and opposite feelings and attitudes about, an object, person, thing or situation, typically of both a loving and hating nature (Auchincloss and Samberg 2012, 14). How we deal with this ambivalence is at the heart of our psychic life (Bion 1970). For example, professional investors are very aware of the danger of falling in love and idealising a stock or company management which can then do no wrong, which feelings then turn to anger and disgust when they do not perform as expected (Tuckett and Taffler 2012, 47–63).

Investment thus provokes highly charged emotions and associated emotional conflict. Such unconscious conflict is dealt with typically by evacuating the potentially unpleasurable thoughts from conscious awareness leaving only the good ones. 'Defences' or 'avoidance strategies' are used in this process. These include *splitting*, mentally separating the good and bad feelings with the latter being *repressed* and rendered unconscious, *idealisation* (the unrealistic exaggeration of attributes or qualities), *projection* (unconsciously attributing unwanted feelings to others) and, crucially, *denial* (the repudiation or disavowal of aspects of external reality the individual does not want to know about to diminish or avoid the painful affects associated with that reality) (Auchincloss and Samberg 2012, 50–52). In this way, emotional conflict or ambivalence is sidestepped and avoided.

2.2. Phantasies

Broadly speaking, the term *unconscious* refers to the mental processes of which the individual is unaware but which nonetheless exert a direct effect on conscious experience. The term is associated with the way in which people are driven by ideas, conflicts and feelings beyond their conscious awareness (Auchincloss and Samberg 2012, 277–279).

Phantasies or wish fulfilling ideas which come into play when external reality is frustrating (Freud 1911) are the basic building blocks of unconscious mental life and thus deep drivers of human behaviour and subjective thought. Such unrecognised emotions are powerful because they remain unknown and thus not accessible to conscious reflection. The term *phantasy* with a '*ph*' is used conventionally by psychoanalysts to refer to unconscious events and *fantasy* to more conscious constructed ones such as day dreams or wishful thinking (Auchincloss and Samberg 2012, 85–87).

Klein (1936) views the whole of an individual's psychic life as dominated by phantasies originating in the early stages of emotional development:

> . . . infantile feelings and phantasies leave, as it were, their imprints on the mind, imprints that do not fade away but get stored up, remain active, and exert a continuous and powerful influence on the emotional and intellectual life of the individual. (290)

Individuals cannot directly know what their phantasies (i.e. unconscious fantasies), or those of others, are, save by inference, nor their disguised effects on conscious experience or behaviour, because of the mental processes of repression. Psychoanalysis, as a dynamic psychological theory, views what has been made unconscious as being more, not less, influential.

2.3. Phantastic objects

As has been pointed out above, investment provokes emotions of both excitement about potential gain (pleasure) and anxiety about potential loss (unpleasure). Emotional finance explicitly incorporates the role of excitement in the study of investor and market behaviour by recognising that any investment can have an exceptionally exciting and transformational meaning in unconscious reality. This stimulates a state of high excitement and associated idealisation leading to the desire to possess.

An important component of emotional finance theory is the idea of the *phantastic object* which originated in trying to understand the powerful unconscious attraction of investors to dot.com stocks during dot.com mania (Tuckett and Taffler 2003, 2008). This derives from the Freudian concept of *object* which is used to describe the internalised 'representations' of people, ideas or things in our unconscious mind (see e.g. Auchincloss and Samberg 2012, 170–173), and *phantasy* as defined above. The term phantastic object describes the unconscious mental representation of something (or an idea) that fulfils the individual's deepest (and earliest) desires to have exactly what they want exactly when they want it. Possession of such phantastic objects allows investors unconsciously to feel omnipotent, like Aladdin whose lamp could summon the genie at will, or the fictional bond trader, Sherman McCoy, in *The Bonfire of the Vanities* (Wolfe 1987) who felt himself to be a master of the universe (Tuckett and Taffler 2008). As Tuckett and Taffler (2008, 396) point out, phantastic objects are exciting and transformational, 'they appear to break the usual rules of life and turn aspects of "normal" reality on its head'. The object has the potential in phantasy to be transformed into an exceptionally exciting and desirable mental image.

Emotional finance theory suggests that in investors' psychic reality all investments have the potential to become phantastic objects not just in market bubbles but even in normal market conditions and day-to-day trading activity, provoking extreme emotions with love turning to hate and anger when they do not perform as expected. Such an awareness of the unconscious and excited ambivalent object relationships of attachment and attraction we enter into with our investments can be very helpful in understanding investor behaviour in a much more complete way (see, e.g. Tuckett 2011, 107–108).

In fact, a good illustration of the power and seductiveness of the phantastic object is well demonstrated by Bernie Madoff's Ponzi scheme which was able to exploit his investors' unconscious search for wish fulfilling investment fantasy: annual returns of 8–12% with no risk seemingly forever (Eshraghi and Taffler 2012, 1565–1566). With Madoff being described as 'the miracle worker', investors and regulators continuously turned a blind eye ignoring any challenges to their emotionally very satisfying phantasy of the omnipotent fund manager (e.g. Markopolos and Casey 2010).

2.4. Judgments and states of mind

As we have seen ambivalence is at the heart of psychic life. All emotional relationships are in some sense ambivalent; we create both good (pleasurable) and bad (unpleasurable) feelings leading inevitably to mental conflict of which we are usually unconscious. We can deal with this in a more or less *integrated* state of mind (Tuckett 2011, xii; correct psychoanalytic term *depressive* [Klein 1952]) where both the good and bad feelings are acknowledged and tolerated, ambivalence is felt and recognised and uncertainty accepted, i.e. in reality. Or in a *divided* state of mind (Tuckett 2011, xi–xii; correct psychoanalytic term *paranoid-schizoid* [Klein 1952]) where by avoiding, ignoring or rationalising away any feelings that might cause mental pain and spoil the positive or pleasurable ones, in an attempt to be left with only the pleasurable, i.e. in a state of unreality. (Schizoid refers to the splitting and projection process, i.e. mentally separating the good and bad feelings, denying or repressing what we do not want to 'know' and projecting these bad feelings onto others. Paranoid refers to the resulting unconscious feelings of persecution.) In a divided state of mind everything is in a sense black or white, there is no uncertainty. Good and bad feelings are kept mentally separate with the latter denied and projected onto others. However, what is repressed and no longer directly accessible to conscious awareness, of course, continues to exist 'behind' the scenes affecting what we do and feel.

Tuckett and Taffler (2008, 400) summarise the distinction between integrated and divided senses of reality; the integrated (i.e. depressive) state 'involves giving up the feeling that one is all powerful and all knowing' and in the divided (i.e. paranoid-schizoid) state 'all such feelings are evaded by evacuating them from awareness'. In investment, there is constant tension between judgments grounded in reality (made in an integrated state of mind), stocks can have both good and bad characteristics, they can go up, and also go down, and those made in a divided state of mind dominated by phantasy. Here, in the investor's mind, the direction is perceived to be only one way, and that is up!

2.5. Financial markets and group psychodynamics

Emotional finance also views markets as large (virtual) groups with behaviour reflecting the interaction of the often unconscious drives, needs, emotions and phantasies of their participants as they deal with the inherent ambivalence and uncertainty of the investment process. Markets, in effect, take on a dynamic unconscious 'emotional' life of their own which commentators often acknowledge by viewing Benjamin Graham's Mr. Market in an anthropomorphic way as being prone to such human emotions as euphoria, mania and panic, and frequently being 'irrational'. Emotional finance also draws on the psychoanalytic understanding of group behaviours (group psychodynamics) in its interpretation of what is going on in markets. Group processes do not require their members to be in the same room; markets are made up of myriad individuals all interacting with each other on different levels and in different ways.

Drawing on the original insights of Freud (1921), Bion (1952) distinguishes between two principal group processes, *work groups* and *basic assumption groups*, which behave in very different ways. In a work group, its members work together in a creative way to a common end using information appropriately, both positive and

negative, in this task. On the other hand, when a basic assumption group operates, the purpose of the group is to provide good (i.e. pleasurable) emotions to its members through the unconscious defences the group as a whole adopts against anxiety, rather than through reality-based thought and working together for a common purpose. In this case, the group does not consider the actual facts. Information is employed to promote comfort and excitement in a divided state of mind with the negative aspects denied and split off. Any potential adverse consequences are lost sight of and *unconscious wishful thinking* dominates. Communication is treated very differently in the two types of group functioning: 'We have been forced to the conclusion that verbal exchange is only understood by the W[ork] group. In proportion as the group is dominated by a basic assumption *verbal communication is important only as a vehicle for sound*' (Bion 1952, 244, italics added).

Such processes are equally present in asset pricing bubbles and in the way new financial innovations and ideas are often treated with investors being caught up in the underlying phantasy. People in basic assumption group mentality (whether actual or virtual) want to agree, face the world together, and be looked after; anything that might challenge such pleasurable feelings is strongly defended against. Anyone who might think differently and question the group's underlying *raison d'etre* risks being ostracised to avoid the group having to acknowledge what its members would rather not know. As Bion (1961, 162) insightfully comments: 'I know of no experience that demonstrates more clearly . . . [the existence of basic assumption group behaviour than] the dread with which a questioning attitude is regarded.' One of the more common basic assumption group processes is what Bion (1952) terms *fight or flight*. Fight-flight refers to the tendency of groups to either attack an object directly or to run away from it in a state of panic which is what we observe occurring in the growth and then imploding of asset pricing bubbles. Bion (1952) also discusses the phantasy of *dependency* in such groups, the leader will look after and provide security for everyone (like a good father) so its members do not have to think for themselves. The way in which the 'legendary' Chairman of the Federal Reserve Bank, Alan Greenspan, was worshipped as an omniscient guru before the Global Financial Crisis is a very good illustration of this point. Belief in the existence of the phantastic object often dominates in basic assumption thinking in financial markets as Section 4 below explores.

3. Emotional finance in practice

The previous section summarised the current state of emotional finance theory; this section explores its relevance to real-world capital markets in a number of different areas.

3.1. Emotional finance, real risk and uncertainty

> Our institutional clients sometimes define risk as tracking error. They are looking to maximise their information ratio, yet you can maximise your information ratio and minimise your tracking error and drive your portfolio right off a 40% cliff. In that case it is about *career risk,* right? . . . to me, the definition of 'risk' is not standard deviation, it's not volatility, it's not beta; it's what your risk of a meltdown [is]. What's the risk that you dig your client into a hole large enough that they never recover, they never get out of it? That's risk!. (Fund manager interviewee quoted in Tuckett and Taffler 2012, 69)

Investment risk is typically measured by such metrics as variance of returns, tracking error, value at risk (VaR), stock beta and a broad range of characteristic-based factors such as size, value/growth, momentum, yield and earnings variability, and viewed as objective and quantifiable. A myriad of different risk measures are employed in finance. Ricciardi (2008), for example, summarises the literature and lists no fewer than 63 distinct types of risk category in traditional finance and 125 risk measures in the behavioural finance literature. Conventional thinking is that risk can be appropriately managed through the application of sophisticated quantitative analysis and experience (e.g. Lleo 2009).

However, as Knight (1921) points out, there is a clear distinction between *risk* and *uncertainty*. Risk is recognisable, measurable and known, being based on the idea that the past can, in a sense, be used to predict the future and that the probability distribution of likely outcomes can be assessed objectively or subjectively. On the other hand, uncertainty is unidentifiable, immeasurable and unknown (Ricciardi 2008). The inability to predict future returns is a key characteristic of all investment activity, albeit usually not consciously acknowledged, and this has clear psychic implications. In psychoanalytic terms, uncertainty leads to (intense) anxiety which

if not contained by psychic defence mechanisms leads to panic, paralysis in thinking and an extreme sense of helplessness (De Masi 2004).

Tuckett and Taffler (2012, ch. 5) show in their interview study of elite fund managers that although they are all familiar with conventional measures of risk, what risk *really means* to them in practice is very different. There are four principal concerns:

(i) Information risk – worries about the quality of the information fund managers rely on to make investment decisions and whether they can trust what company management is telling them,
(ii) Anxiety (risk) about the inherent unpredictability of the investment task,
(iii) Business risk – the danger of underperformance leading to client loss, and
(iv) Career risk – threats to compensation and promotion, and even job termination, if the fund manager underperforms for any length of time.

Emotional finance distinguishes between 'rational' or *idealised* measures of risk which imply that the future can implicitly be predicted in terms of a probability distribution of potential outcomes, and uncertainty or *real* risk which relates to the actual anxieties of investors. It sees the attraction of risk measurement models as not just in terms of their 'truth value', but also the way in which they can be used in a divided state of mind to provide emotional comfort that in some sense investment outcomes are no longer uncertain. The anxiety associated with the fact that future returns cannot be controlled can be unconsciously defended against through the psychic processes of splitting, projection and denial in industry-wide collusive basic assumption group thinking. The unconscious panic associated with the fact that the future is ultimately uncontrollable can be avoided, rather than recognising its inherent unpredictability in an integrated state of mind.

On this basis then, emotional finance shows how statistical measures of risk also serve as *pseudo-defences against uncertainty* or *real* risk. They are employed directly on one level as a way of avoiding the external reality the unpredictable future represents so that the associated mental conflict in psychic reality this leads to can be held at bay. The quote at the beginning of this sub-section makes this point very clearly.

3.2. Emotional finance and the need to trust

As has been pointed out above, investment is synonymous with uncertainty; investors cannot predict with any degree of accuracy the outcomes of their investment decisions. This inevitably leads to anxiety which is often suppressed. Given such unpleasurable emotions, how are investors able to enter into ambivalent object relationships with assets that can so easily and painfully let them down? Emotional finance views this enigma in terms of the key role trust plays in the investment process.

Trust permeates all human activity with the ability to trust rooted in the security of early infant experiences and parental physical and emotional dependency relationships (Neri 2005). However, there are the inevitable, and often unconscious, conflicts between trust, suspicion and need, and the associated anxiety about being misled or let down, which are experienced as truly frightening in psychic reality. Nonetheless, without the ability to trust (and have faith) investment is not possible, leading to stasis. To invest (act) is to trust. The ability to trust when 'not knowing' the outcome generates the conviction to commit to an asset or stock. Trust leads to *vulnerability* as it involves giving discretion to, relying on, or being vulnerable to, another under conditions of uncertainty (Shapiro 2012) whether, for our purposes, the 'market', company management or the analyst who provided the original investment idea. Importantly, it provides an 'illusion of control' (Pixley 2004, 19–20). Trust 'trumps' anxiety and leads to action; in emotional terms, it links the present and the future – it 'creates' desired future outcomes.

Trust is also linked in investment to faith which requires only conviction or 'belief', not verification or confirmation, and is based on *idealisation* (i.e. 'perfection' as in the phantastic object) and *illusion*. Reality testing, as in investment generally, is avoided with basic assumption group thinking dominating – faith is facilitated within the collective belief of the group (Neri 2005) in financial markets.

The need to trust to be able to invest despite the associated anxiety about being thwarted helps us understand not just how investors are able to engage in markets when future outcomes are uncertain, but also why fund

managers place so much emphasis on meeting company management. This is despite them often being aware of how easily they can be misled (e.g. Barker et al. 2012). Although meeting management leads to trading activity (e.g. Bushee, Jung, and Miller 2011, 2013), there is no evidence this is translated into superior longer term returns. In fact, Agarwal, Taffler, and Brown (2011) show that despite the quality of management being value relevant this is already in the market price so investing in stocks perceived to have good management does not lead to superior returns. Such meetings seem to have as their main purpose the alleviation of (unconscious) anxiety by projecting this on to firm management to perform for the fund manager, and generating the feeling of trust (or personal liking of the CEO or management team) needed to invest in the first place. Similarly, Gennaioli, Shleifer, and Vishny (2015) describe the key role trust plays in the relationship between investors and their financial advisers and money managers which they compare to that existing between patient and doctor. Investors want to be looked after and have peace of mind; in other words, they need to trust and are seemingly prepared to pay highly to be able to do this.

Emotional finance views the resolution of the anxiety inherent in the investment process associated with the unknowable future in terms of the key role trust and (blind) faith play in the process. To trust is to invest!

3.3. Emotional finance and stock market anomalies

Stock markets are conventionally viewed as 'efficient'. However, much of the finance literature has focused on seeking to identify trading strategies that violate the Efficient Markets Hypothesis. Fama and French (2008) and Avramov et al. (2013), for example, explore a range of asset pricing anomalies, and Green, Hand, and Zhang (2013) demonstrate that the existence of such anomalies is much more pervasive that is usually recognised. This sub-section suggests some parallel emotional finance explanations for why stock market anomalies *could* happen in practice. Although such empirical regularities clearly do exist despite some attenuation in recent periods (e.g. Chordia, Subrahmanyam, and Tong 2014; McLean and Pontiff 2016), whether abnormal profit opportunities can actually be earned after all costs is a separate issue (e.g. Rubinstein 2001).

Investors acting individually as well as together enter into essentially ambivalent object relationships with stocks where what these represent in psychic terms may well dominate their relative attractiveness based on conventional fundamental asset valuation criteria. On this basis, for example, in the context of the market/book (growth/value) anomaly (Lakonishok, Shleifer, and Vishny 1994) where value stocks outperform growth stocks, emotional finance would characterise high market to book stocks as potentially 'good objects' in unconscious terms. Such stocks, which may be growing rapidly, have significantly outperformed, are in new and desirable industries and where there is a lot of corporate finance activity and news coverage can be 'exciting' (pleasurable) and, as a result, potentially overpriced leading to subsequent underperformance. On the other hand, low market to book stocks may well be mentally perceived as 'bad objects' with such anxiety-generating or painful (i.e. unpleasurable) characteristics as having underperforming significantly in the recent past, poor profitability and growth prospects, being seen as risky and unpredictable and perhaps with adverse media coverage and low management quality. This would then lead such emotionally 'tainted' stocks to being potentially underpriced in fundamental terms, and subsequent outperformance.

The parallel behavioural finance explanation would focus on investor cognitive bias. In fact, Lakonishok, Shleifer, and Vishny (1994, 1551) seek to explain their empirical results by drawing on the base rate fallacy of the representativeness heuristic with investors' statistical predictions based on extrapolating past data without a full appreciation of mean reversion. However, although they find glamour stocks growing substantially faster than value stocks in terms of fundamentals *prior* to portfolio formation but much more modestly *post*, consistent with their story, if this is actually due to investor information processing errors *per se* cannot be answered by their data. Whether the alternative emotional finance explanation framed in terms of what such stocks represent in terms of investors' psychic reality is more plausible needs, of course, to be tested empirically.

In the case of the well-known momentum anomaly, the continuation of prior returns (e.g. Jegadeesh and Titman 1993), emotional finance would predict an unconscious need for market prices to have already moved up for investors to have the confidence to trust in and commit to the risky asset. That the stock is already a good object and viewed as such by others may serve to provide reassurance and help alleviate the anxiety associated with involvement with an investment that can easily let the investor down. Emotional excitement in the

unconscious itself has momentum. The experience of emotion tends toward infinity exponentially (Rayner and Tuckett 1988); people want more and more pleasurable emotion (psychic excitement). On the other hand, those stocks which have underperformed may well be perceived as bad objects with unpleasurable (painful) associations and as a result be stigmatised leading to further price decline. Such a perspective, of course, is very different to that of behavioural finance which explains momentum in terms of the inherent biases investors are prone to in interpreting information. Jegadeesh and Titman (2001) empirically test the predictions of three well-known theoretical behavioural finance models posited on the operation of different heuristics and biases against a traditional risk-based explanation; however, although being able to reject the latter, they are unable to determine the validity of any of the different behavioural models.

This paper suggests that emotional finance could be helpful in explaining stock market anomalies apart from momentum and value/growth. At the very least, it can provide alternative empirically testable propositions for the existence of particular market anomalies to complement those of standard and behavioural finance by explicitly acknowledging the role phantasy and wish fulfilment play in all investment behaviour.

Market underreaction to bad news appears manifest in the finance literature, whereas good news seems to be anticipated or incorporated in market prices immediately and without bias. For example, the market reacts instantaneously to sell-side analysts' new buy recommendations but takes several months for the information content of new sells to be fully priced (e.g. Womack 1996; Mokoaleli-Mokoteli, Taffler, and Agarwal 2009), and similarly with bond rating changes (e.g. Dichev and Piotroski 2001; Avramov et al. 2009) and going-concern modified audit reports (Taffler, Lu, and Kausar 2004; Kausar, Taffler, and Tan 2009). Although in many cases limits to arbitrage can help explain the time needed for the market fully to react to bad news events (e.g. Lesmond, Schill, and Zhou 2004), emotional finance provides another perspective. This is that such differential market reaction to good and bad news may well be inevitable in group situations where basic assumption group thinking dominates and there is a tendency to split good and bad. In a divided state of mind, people employ a range of unconscious defences against the emotional pain of having to acknowledge that their previously 'idealised' investments have let them down, both financially and emotionally. Such mental defences against 'knowing' can be very powerful and entrenched and it may well take time for reality ultimately to overwhelm them leading to delay in the market fully responding to the pricing implications of the bad news (e.g. Steiner 1985). On the other hand, good news which is pleasurable and exciting and what investors are continuously seeking has no such barriers to its assimilation.

3.4. Investment and gambling

Gambling is conventionally defined as betting or wagering, usually for money, where the outcome is outside of our control. Excitement, thrill or psychic charge is an integral component. In psychodynamic terms, it represents a struggle with Fate (Freud 1928). Whereas most gambling including lottery playing and stock market investing is benign, gambling can also be pathological in nature and represent an addictive disorder.

Stock market investors and lottery buyers have much in common (Statman 2002) and similar personality traits (Jadlow and Mowen 2010). In his seminal paper 'Who Gambles in the Stock Market?', Kumar (2009) shows how the propensity to gamble and the investment decisions of retail investors are correlated. State lotteries, used to proxy for gambling propensity, and stocks with similar gambling-like characteristics attract very similar clienteles. In particular, Kumar (2009) investigates the extent to which people's overall attitude towards gambling influences their stock investment decisions. Based on a range of detailed analyses, Kumar concludes that there are 'a set of common personal attributes' which provide evidence of strong similarities between the behaviour of state lottery players and individual investors who invest in lottery-type stocks.

An interesting avenue that may be pursued here is to recognise that investing in the stock market generates many of the same emotions experienced by gamblers in a casino. Rosenthal and Rugle (1994) explore gambling from the psychodynamic perspective and parallels with stock market investing are striking. The authors describe the excitement gambling generates and the strong sensations it arouses. Physiologically, it can have a temporary anti-depressant effect for people who are depressed as the intense concentration and focus involved blocks out memories of everyday life. However, in seeking to keep depression at bay reality is kept at bay as well.

The feeling of *omnipotence* or *omnipotent control* acting as a *manic defence* (Segal 2008, 82–84) may be the most important concept for understanding the pathological gambler with this defined in psychoanalytic terms as the illusion of power and control to defend against helplessness, shame and guilt. Crucially, as with stock investment, 'essential to the activity of gambling is the notion that one can predict the future. One is attempting to control the uncontrollable . . . gambling offers the possibility of the improbable or seemingly impossible occurring' (Rosenthal and Rugle 1994, 32). Gambling offers an escape from painful awareness of the world (Schull 2012). Phantasy is inherent in maintaining the denial of external reality; the pathological gambler believes, in the face of evidence to the contrary, that he or she can gamble in a normal or controlled manner. In a divided state of mind, the gambler gambles as an elaborate defence against the psychic pain of unwanted reality (Whitman-Raymond 1988). Bergler (1957) also describes the gambler's unconscious motivations as including the desire to lose and be punished.

Interestingly, aspects of investing in the stock market have direct parallels with the diagnostic criteria for 'gambling disorder' (or the addiction of pathological gambling) in the DSM-5 (APA 2013, 585–589). Konstantaras and Piperopoulou (2011) show retail investor trading in the stock market to be addictive and how active traders both exhibit a significant incidence of compulsive behaviour and underestimate the degree of risk. In fact, gambling in the stock market is not restricted to day traders, only 1% of whom are actually able to earn positive returns net of fees (Barber et al. 2014). Although the DSM-5 (APA 2013) distinguishes between professional gambling where risks are limited and discipline is central and gambling disorder (with overall lifetime population prevalence rate of 0.4–1.0%), there may nonetheless be some similarities in the behaviour of professional investors. These would include the level of excitement and related implicit beliefs about the ability to control future desired outcomes (e.g. Tuckett and Taffler 2012). It is not for nothing that speculating was the word used to describe stock market investing until the end of the nineteenth century (Itzkowitz 2002; Preda 2005). Emotional finance suggests that however useful insights from viewing investing in terms of entertainment and sensation seeking may be (e.g. Dorn and Sengmueller 2009; Grindblatt and Keloharju 2009; Dorn, Dorn, and Sengmueller 2015), we also need to go beyond this fully to understand the psychic reality of the investment process.

Much of the behavioural finance literature, in contrast, views the nature of gambling through the lens of the cognitive psychologist to elucidate the process of decision-making in situations of risk (e.g. Kahneman 2011, 270). Prospect theory (Kahneman and Tversky 1979; Kahneman 2011, ch. 26) and its later variants are highly influential in behavioural finance. Prospect theory demonstrates the differential utility or psychological value of dollar gains and losses with its original research based on simple hypothetical gambles in the form of laboratory coin tossing or probability type experiments with different gain and loss payoffs in different wealth domains. This is a very different question to what emotional finance is concerned with which relates to the psychodynamics of the investment process and the vital role unconscious fantasy plays in dealing with the unpredictable which has the potential for aspects of pathological behaviour.

3.5. Emotional finance and retirement saving behaviour

Individuals often fail to save adequately for retirement (Skinner 2007). Behavioural finance explanations are often adduced. Agnew (2010) provides a good summary of behavioural explanations for lower than expected participation rates in pension savings plans which include such things as the tendency to procrastination given the complexity and importance of the savings decision, as well as lack of financial knowledge. There are also problems of self-control and time inconsistent behaviour leading to the pursuit of immediate gratification over long-term benefits. In addition, once the employee is enrolled in the plan, a strong default bias is observed with contribution rates anchored to the (usually low) default rate, rather than a more appropriate one (Benartzi and Thaler 2007). Whereas automatic enrolment is now conventionally used to encourage participation in retirement saving plans thereby significantly increasing participation rates, including since October 2012 by the UK government, nonetheless savings levels remain very low and inadequate to provide appropriate pensions on retirement. Ackert and Deaves (2010, ch. 17) also provide a good survey of more general issues.

However, this understanding ignores the very powerful emotions and phantasies associated with retirement such as ill-health, infirmity and, importantly, the fear of death. The emotional resonance of retirement and

associated need to save for this may thus lead to unconscious not wanting to know, splitting off and repressing the implications of inevitable old age and death from perhaps a currently healthy and active early middle age. Mutual funds often market their pension products using pictures of an idealised and happy retirement with the implication that all this can be had by buying their savings plans. From an emotional finance perspective, the risk is that this could feed into a divided state of mind and the associated wish-fulfilling phantasy that the infirmities of old age will not apply to us with reality split off, repressed and denied. Such unconscious dynamic processes are deeply rooted and need to be properly acknowledged. Interestingly, Skinner (2007, 60), a professor of economics, makes this point very clearly, presumably unconsciously, when he states 'thus, saving for retirement may ultimately be less about the golf condo at Hilton Head and more about being able to afford a wheelchair lift, private nurses, and a high quality nursing home'. In this context, one may recognise how Freud (1905) saw jokes as a way of avoiding facing what one does not want to know. Jokes bear the traces of what is repressed returning to haunt us in disguise.

Behavioural economists advocate libertarian paternalism (e.g. Thaler and Sunstein's book *Nudge*, 2008) which takes advantage of our cognitive biases to shift us towards more 'appropriate' behaviour (although philosophers may view this to be morally problematic, e.g. Hausman and Welch 2010). Thaler and Benartzi (2004) show directly how 'nudging' can be used as a means of encouraging better pension saving decisions and overcoming self-control problems (also see Thaler and Sunstein 2008, ch. 6). Emotional finance, on the other hand, explicitly recognises the role unconscious defences play in preventing appropriate retirement planning decisions and facilitating 'turn[ing] a blind eye to the facts' (Steiner 1985, 165).

4. Bubbles and financial crises: an emotional finance perspective

Extant financial and economic theories find great difficulty in explaining asset pricing bubbles and financial crises in any convincing way (for summaries of attempts see, e.g. the surveys of Brunnermeier and Oehmke 2013; Scherbina 2013; Jarrow 2015). Even the definition of what a bubble is cannot be agreed upon and there is a continuing debate as to whether if they actually exist they are 'rational' or 'irrational' (O'Hara 2008). Models of bubbles, usually of a highly mathematical nature, revolve around ideas of herding, informational cascades and the 'greater fool' theory (see Hirshleifer and Teoh 2003 for an accessible overview). The roles played by unconscious emotions and social and group processes are effectively ignored (Shiller 2014; Hirshleifer 2015). In fact, Hirshleifer (2015, 151) specifically points out how taking this into account can 'offer a deeper basis for understanding the causes and consequences of financial bubbles and crises' whereas restricting the analysis to the potential operation of cognitive biases can only lead to limited insights.

In fact, many economists and finance academics make strenuous efforts to deny asset pricing bubbles exist despite clear evidence to the contrary; if markets are efficient such bubbles should not occur. Eugene Fama (2014), for example, even used his 2013 Swedish National Bank (Nobel Memorial) Prize in Economic Sciences address to argue against the existence of asset pricing bubbles and that market efficiency is not violated. However, by considering, *inter alia*, the US market index, using a graph with a natural logarithmic scale so major price movements are visually attenuated, and focusing mainly on index values many years apart, rather than the actual bubble trajectory itself, his arguments are less than convincing. Fama's attack on the work of his co-Laureate Robert Shiller (2014), who in his parallel address questions the rationality of markets, also well illustrates the emotions aroused and the power of unconscious denial (Steiner 1985). In parallel, there is even a tendency among some economists to see bubbles as unavoidable implying trying to understand their causes makes little sense (Shulman 2016), or alternatively to argue that bubbles are in fact 'rational' and thus consistent with neoclassical economic theory (Engsted 2016).

Scherbina (2013, 15–22) summarises a number of simple behavioural models which she draws on in an attempt to explain asset pricing bubbles from a behavioural perspective. However, these are predominantly theoretical in nature and it is difficult to see how they can relate to the visceral emotions stirred up and states of intense excitement investors collectively experience which drive bubble trajectories. We need to go beyond the lens of individual level behavioural biases if we really want to explain such powerful and emotive dynamic market-wide experiences which have very serious and highly adverse consequences for markets and the global economy more generally.

Accounts of what actually happen in financial crises and asset pricing bubbles (e.g. Galbraith 1993; Mackay 1995; Cassidy 2002; Tuckett and Taffler 2008; Aliber and Kindleberger 2015; Taffler and Bellotti 2015) are first and foremost descriptions of highly emotional speculative processes. Terms such as excited, euphoric, exuberant, manic, depressed, anxious, blame, illusion, delusion and panic abound. Drawing on the psychoanalytic understanding of unconscious fantasy relationships, states of mind and basic assumption group mentality, emotional finance can have a role to play in helping to explain why asset pricing bubbles and financial crises continuously repeat.

In the following sub-section, case studies of dot.com mania and the 2005–2008 Chinese stock market bubble are placed within the broader context of the path-dependent process of asset pricing bubbles, and in the second sub-section the recent Global Financial Crisis is explored.

4.1. Dot.com mania and the Chinese stock market bubble

A common feature of the myriad of financial crises described in Aliber and Kindleberger (2015) ranging from tulip bulbs, through the South Sea Bubble, canals, railroads, stock prices before the Great Crash, real estate, Internet stocks and the recent property led financial crisis, is the presence of a five-stage path-dependent emotionally driven trajectory. In each case, *patchy excitement* about an innovation leads to *euphoria* (or mania), *anxiety* and *denial* (or manic defence) and then when reality ultimately intrudes and the bubble bursts *panic* followed finally by *revulsion* (or shame and blame). Tuckett and Taffler (2008) point out that throughout this process, it is not a question of lack of knowledge about the riskiness of the respective investments, but the way in which this is treated. They view asset pricing bubbles as due to a disturbance in the market's sense of reality brought about by an exciting new idea that captures the financial imagination (a phantastic object) with an associated move from individuals investing using the reality principle towards judgments based essentially on the pleasure principle. Markets turn from work group towards basic assumption group functioning. Collective wishful thinking is the order of the day. Emotional conflict is eliminated, or at least reduced, with anything that might create bad feelings evacuated from awareness. Together these processes allow the phantastic object to be pursued as if it were 'real' with any associated anxiety denied and repressed. However, eventually reality has to intrude, panic takes over and the phantastic object is now hated and an object of revulsion.

Because of the enormous excitement and repetition of associated feelings of infantile omnipotence (Freud's (1911) 'His Majesty the Baby' metaphor is useful here) that possession of the phantastic object provokes, the shared unconscious fantasy (that the phantastic object actually exists) is legitimated in market-wide fight-flight (Bion 1952) basic assumption group processes. Market participants unconsciously collude in collective denial in a fight against underlying reality including recourse to the superficially plausible cover story that 'this time it is different' (Aliber and Kindleberger 2015, 41). Sceptical commentators felt to be denying the value of the phantastic object, and spoiling the party are treated with contempt and dismissal (e.g. Cassidy 2002). Their warnings are viewed as an attack motivated either by 'deficient understanding or uncontrolled envy, on the wonderful process of enrichment ... [or] thought to demonstrate a lack of faith in the inherent wisdom of the market itself' (Galbraith 1993, 2). In this context, Galbraith (1993, 8–9) writes entertainingly on his personal experiences (and the hate mail he received) after testifying to a Senate hearing in early 1987 about the speculative increase in market prices and his predictions of a forthcoming Crash. Importantly, observation of actual bubbles demonstrates how when the bubble eventually bursts this is not due to new information but that the repressed anxieties can no longer be rendered unconscious. The whole process then goes into reverse with investors now taking flight in a headlong panic to rid themselves of the now despised phantastic object. Anger and blame of others rather than feelings of personal guilt erupt allowing investors to remain operating in a divided state of mind and avoid the painful realisation of how they have been caught up themselves in a very exciting wish-fulfilling phantasy. Emotional finance also points out the mental pain involved in giving up belief in the transformational power of the magical phantastic object. Anxiety will change into even more painful feelings of loss, humiliation and guilt when unconscious defences against reality no longer work.

In the case of the Internet bubble, as is well known, the Dow Jones Internet Index rose by 500% in 18 months to its peak in March 2000 despite most firms losing large amounts of money and likely to continue making losses for many years, even if they managed to survive. Six weeks later the Index had halved in value and by the end of

2002 was still at only 8% of its high. Cassidy's (2002) seminal history of the period *Dot.con* describes how Internet stocks were treated in the media as an exciting spectacle with their young entrepreneurs presented as charismatic figures and superstars with amazing new powers. Such stocks possessed all the characteristics required of phantastic objects: exciting, new, exhibitable and enriching with their possession 'promising' investors that their deep unconscious wishes could be fulfilled through magical thinking.

Not surprisingly on this basis normal valuation fundamentals were no longer relevant with the market's subjective sense of reality being captivated by the phantastic object becoming 'real'. Everyone seemed to have been caught up equally in the underlying phantasy, professional as well as retail investors (e.g. Griffin et al. 2011). The *manifest cover story* necessary to rationalise departure from reality into phantasy was that the 'old economy' adult world of 'bricks and mortar' had been replaced by the 'new economy' of the 20 somethings; in short, the old economy was dead (Tuckett and Taffler 2008). The hubristic claims made about how the Internet would drive out traditional ways of doing business and the associated level of emotional excitement also signalled intergenerational rivalry and state of oedipal triumph (Auchincloss and Samberg 2012, 180–182). As Josh Harris, the founder of Pseudo.com, a fledgling online television network, reported when interviewed by CBS, his aim was 'to take you guys out of business. I'm in a race to take CBS out of business' (Cassidy 2002, 276). On one level the young seemed to be seeking to overthrow the old with associated unconscious guilt and fear denied.

Via fight-flight basic assumption group thinking, the capacity to be anxious about potential risk and loss was split off and the reality principle became dominated by judgments based on the pleasure principle through investors' imaginative identification with each other in the pursuit of the common phantasy. Ultimately, only when the split off anxieties produced by available information could no longer be rendered unconscious in March 2000 did the market collapse. The bubble then burst almost overnight, panic set in and the nature of the ambivalent relationship of investors with the phantastic object reversed direction dramatically with dot.com stocks now hated. There was enormous anger associated with the feelings of being let down, embarrassment, fear, helplessness and shame quite apart from the heavy financial losses. Still operating in a divided state of mind those involved felt persecuted and as a result had to project the pain for being caught up in their phantasy onto others. Interestingly, general equity markets suffered contagion with the S&P 500 falling by more than 40% over the three years following the bursting of the dot.com bubble. All stocks were seemingly tainted, even those that had nothing to do with the Internet! An emotional finance reading of dot.com mania which formally recognises the key role played by unconscious fantasy and market-wide psychodynamic processes is clearly very different to attempted explanations offered by traditional finance and behavioural finance models.

The Chinese speculative stock market bubble of 2005–2008 (Yao and Luo 2009; Taffler and Bellotti 2015), in which investors lost over $3 trillion, more than three times as much as in dot.com mania, has almost the same trajectory as Figure 1 illustrates. However, discussion of this bubble, for some reason, is largely absent in the finance literature, as with its recent rerun in 2014–2016. This emotional finance suggests may possibly be due to the process of denial and not wanting to know (Steiner 1985) given the problems *extant* economics and finance theories have in explaining such dramatic events in any plausible way. Specifically, between June 2005 and October 2007, when it peaked, the Shanghai Stock Exchange Composite Index had risen fivefold with the Chinese stock market becoming, for a short time, the third largest stock market in the world. It then went into free-fall losing 70% of its value over the following year. Even at the end of June 2014 before the most recent Chinese stock market bubble started to inflate the Shanghai Composite was standing at only a third of its previous high. Taffler and Bellotti (2015) conduct discourse analysis of media coverage of the Chinese bubble as it evolved and subsequently inevitably collapsed. They find the same emotional path-dependent trajectory as in dot.com mania with parallel market-wide basic assumption group thinking and equivalent beliefs in the phantastic object which in this case was the Chinese stock market itself. The manifest cover story was that the 10% annual growth rate in China's GDP coupled with the government's embracing of capitalist ideas would trigger a continuing increase in share values. Everything had changed. The state of manic excitement and euphoria was fanned by the financial media and Internet websites and everyone wanted a stake believing the government, playing the role of 'the leader' in the market-wide dependency basic assumption group thinking would ensure that there was no downside risk. Investing in the Chinese stock market took on the nature of a one-way bet. Any nay sayers seeking to introduce some sense of reality were summarily dismissed. At its peak, the average P/E ratio for Chinese firms was 73 compared with under 20 for the S&P 500.

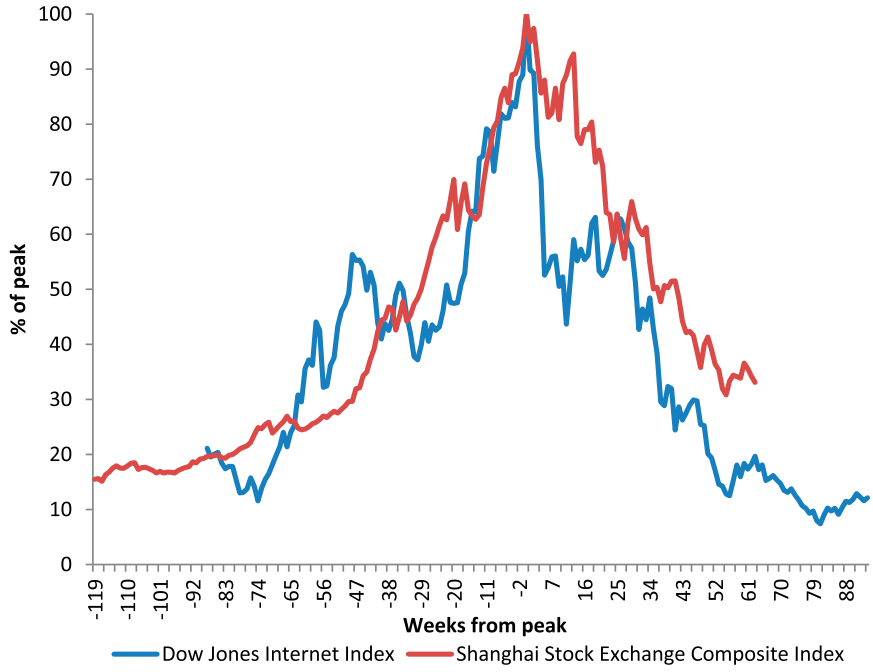

Figure 1. Dot.com Mania and the Chinese Stock Market Bubble. This figure shows the Dow Jones Internet Index and the Shanghai Stock Exchange Composite Index over the 3½ year period around the peaks of the two stock market bubbles with values rebased and expressed as a percentage of the respective index highs.

When ultimately increasing levels of anxiety can no longer be held at bay reality begins to overwhelm the enormously satisfying wish-fulfilment phantasy associated with owning the phantastic object. One possible trigger for the bursting of the Chinese stock market bubble seemed to be increasing concerns about the impact of the credit crunch in the US on East Asia despite the fantasy that the Chinese market was safe and disconnected. Chinese investors began to panic; reality was no longer as they wanted it to be. Excitement turned to revulsion and condemnation with the Beijing government now blamed for letting Chinese investors down and responsible for their market losses. Interestingly, it seems that investors have difficulty in learning from their painful experiences in asset pricing bubbles as the almost exact rerun of the 2005–2008 bubble only 6 years later, albeit on a more compressed timescale, illustrates. Pursuit of the phantastic object is very seductive!

Recurrent asset pricing bubbles can be viewed on one level as the inevitable consequence of investors' unconscious search for transformational phantastic objects. Conventional attempts to explain such events are constrained by economists' assumptions about individuals' rational utility maximising behaviour or in the case of behavioural finance models, the operation of individual level cognitive processing errors. This paper suggests that explicitly recognising the inherently emotional nature of investor relationships with their assets, and their phantasies and unconscious needs, may well be helpful in understanding the nature and trajectory of asset pricing bubbles and how such enormously damaging repetitive tendencies in financial markets might be alleviated.

4.2. The Global Financial Crisis

An enormous amount has been written seeking to explain the Global Financial Crisis. For example, Aliber and Kindleberger (2015, 16–18) list well over 30 books by journalists, academics and 'insiders' attempting to do this 'with titles and subtitles . . . express[ing] common themes – greed, the malfunctioning of markets, the corruption of Wall Street, and the capture of the regulators by the bankers. And more greed.' This sub-section

explores whether formal analysis of the key role unconscious fantasy and basic assumption group psychodynamics demonstrably played in the run up to the Global Financial Crisis, and how these were acted out, may be helpful in understanding what happened and what we can learn from this to avoid repetition. Discussion of such issues has been noticeably lacking in the finance and economic literatures to date. For example, mention of the unconscious is completely absent from any 16 articles by leading academics and other experts on different aspects of the financial crisis in the almost 300-page-long CFA Research Foundation's monograph *Insights into the Global Crisis* (Siegel 2009). Similarly, the terms 'emotion', 'fantasy', 'illusion' and 'mania' are employed in total only once in every 30 pages, even though there is a chapter entitled 'Panic of 1907 and the Subprime Crisis' (Bruner 2009).

The 663-page-long *Final Report of the Financial Crisis Inquiry Commission* set up by Congress in 2009 (FCIC 2011) concluded the 'crisis was avoidable and the result of human action and inaction . . . [and it was] the failure to account for human weakness that is relevant to this crisis' (xxiii). However, blame substitutes for any attempt at real understanding of the underlying psychological processes at work. Tellingly, the words 'psychology' and 'psychological' appear only once each in the entire report and in both cases in an unrelated context and there is not a single mention of 'fantasy'. '[E]motion', 'mania' and 'illusion' are only used once in every 50 pages; however, 'panic' is mentioned 101 times!

All commentators were clearly aware of the degree of contagious excitement seemingly dominating financial markets in the lead up to the collapse of Lehman Brothers on 8 August 2008, which seemed to trigger the financial crisis properly. The FCIC (2011) report eloquently testifies how government, central bankers and regulators became caught up with investment bankers and other market participants in basic assumption group 'bubble think' euphoria with the apparent belief that there was no downside to speculation. Interest rates were low, risk had been vanquished, and in a process of collective and collusive manic denial any associated uncertainty and anxiety was split off and repressed. In the divided state of mind dominating, highly profitable but high-risk subprime lending, adjustable rate mortgages and no documentation loans almost became the norm. House prices could only go one way and borrowers could always sell their houses at a profit if they could not keep up with the payments! Even Wall Street bankers directly involved in the mortgage securitisation process were caught up in the same phantasy aggressively buying larger houses and investing in second homes during the boom and failing to anticipate the crash (Cheng, Raina, and Xiong 2014).

The new credit derivative-based financial products being constructed such as credit default swaps also became represented in investor psychic reality as unconscious phantastic objects with the speculative loans 'safely' split off and securitised into complex investment vehicles such as synthetic collateralised debt obligations which spread the risk throughout the financial system. The concurrent ideological deregulatory movement and the lifting of capital requirements on banks by the Securities and Exchange Commission in 2004 were again part of the same illusory thinking (Shulman 2016).

Investors and financial institutions became entrapped in the enormously exciting basic assumption group wish-fulfilling belief that almost any risk could be managed. The comforting cover story of 'new millennium finance' was rationalised around the idea of a further phantasy. This was that through an apparent magical sleight of hand the omnipotent new masters of the universe, 'rocket scientists' with PhDs in mathematics and nuclear physics, had managed to vanquish risk and unpredictability forever with their complex and opaque derivatives products. What was good (the excitement) was kept conscious and what was bad and anxiety generating (potential loss) was split off and repressed. This was even though on one level market participants clearly knew what they were doing. Citigroup's then CEO Chuck Prince's now infamous words illustrate this clearly: ' . . . when the music stops in terms of liquidity, things will be complicated. But as long as the music is playing, you've got to get up and dance. We're still dancing' (Nakamoto and Wighton 2007) (Perhaps in unconscious reference to The Titanic where the band continued to play as it sank?)

Invariably the euphoric bubble had to burst as the reality of falling house prices and the toxic nature of the credit derivative products that fanned the flame of the bubble could not be kept at bay for ever. What market participants had always 'known' but did not want to know (Steiner 1985) could no longer be defended against and denied. Excited wishful thinking built on the phantastic object represented by the idea that risk had been eliminated turned very rapidly to blame with everyone blaming everyone else. Markets inevitably turned from fight against acknowledging the underlying risk to flight with the S&P 500 falling by almost 50% between October

2007 and its lowest point in March 2009 only managing to recover to its previous level four years later in early 2013. By the end of March 2016, the 6 largest US investment banks had already paid out $110 billion in fines and settlements for their inappropriate practices during the subprime bubble with this total subsequently increasing further (Rexrode and Glazer 2016).

Bruner (2009, 33) explains how 'the concept of an emotional market "panic" challenges fundamental economic assumptions about the rationality of economic decision-makers'. Traditional economic theory does not have the tools to deal with such dramatic events as the Global Financial Crisis. Behavioural finance explanations equally seem restricted in being able to account for this systemic breakdown. Shefrin (2009b), for example, uses five representative cases (UBS, S&P, AIG, an institutional investor and the SEC) and a behavioural corporate finance framework to argue that the operation of 12 cognitive biases generated the Global Financial Crisis. However, cognitive psychology alone clearly cannot account for the contagious state of market-wide manic excitement and associated basic assumption group collusion between investment banks, the Federal Reserve, the Treasury, government and other agents caught up in the enormously pleasurable phantasy that the phantastic object was real, with the resulting panic and helpless trauma as the phantasy unwound. We may speculate whether if the role played by phantasy, illusion and unconscious needs in driving the behaviour of economic actors, the realm of emotional finance, were properly recognised then better financial and market solutions might result (Tuckett 2011, ch. 10).

5. Emotional finance and the investment industry

The research evidence suggests that on average fund managers are unable to outperform other managers or their respective benchmarks after costs (e.g. Carhart 1997; Fama and French 2010), and particularly in more recent periods (e.g. Barras, Scaillet, and Wermers 2010). Also, even if particular managers do have superior abilities it is very difficult to identify them ex ante (Jones and Wermers 2011) and, more generally, distinguish skill from luck. This inevitably creates enormous anxiety and potential panic.

Fund managers work in a highly emotionally charged environment where future outcomes are uncertain and have to enter into ambivalent object relationships with the assets they buy and sell, which can easily let them down. Anxiety and denial dominate in their attempt to make sense of what they do. Ultimately, they are required to split off and repress what they do not want to 'know', i.e. 'turning a blind eye' (Steiner 1985). This section analyses the nature of the fund management industry from an emotional finance perspective. First, the paradox of the industry being built on the idea it is possible to do something which is not possible is explored; the following sub-section then discusses what really drives asset manager behaviour.

5.1. Fund managers as phantastic objects

Stock markets are environments in which investors' unconscious needs and phantasies are played out. Participants enter into emotionally dependent relationships with their assets, whether consciously aware of this or not, that render them vulnerable. Fund managers have to operate in a highly unpredictable environment. Together with the demands implicitly placed on them to outperform almost on a quarter to quarter basis, this leads to emotions which oscillate continuously between excitement (pleasure) and anxiety (unpleasure). Feelings of trust, hope and love (i.e. attraction) are continuously pitted against those of worry, disappointment, fear and hate (i.e. repulsion) (Tuckett and Taffler 2012, 89–90).

What is not often recognised is how fund managers are being used by the asset management industry to create unrealistic expectations among investors. The industry is built on the idea that at least some fund managers can outperform consistently over time which is what investors, as a result, sign up for. To be able to do this, fund managers have to believe they can find phantastic objects, stocks which will earn them high returns with low or no risk which other investors have not yet discovered.

In parallel, fund managers themselves are in some sense being employed as phantastic objects. They are the omnipotent agents that their investors, employers, financial advisers, investment consultants and the media unconsciously need to believe in to alleviate the anxiety associated with the fact that investment outcomes are essentially unpredictable. On one level, the whole industry is engaged in basic assumption group thinking in

the delusion that it is possible to do something which is very difficult if not impossible. Money management is an industry built on a divided state of mind in which underlying reality (the improbability of consistently generating superior returns) is held at bay. Unconscious collusion and the strength of group processes inhibit any proper examination of this paradox. What this means is that the important part the fund manager plays in meeting the real (psychological) needs of his or her investors in many different ways (see e.g. Tuckett and Taffler 2012, 95–97) is ignored.

Emotional finance directly recognises the fundamental non-phantastic role professional asset managers have in helping their investors save and invest in the stock market despite the always present feelings of insecurity and threat of loss. Winnicott's (1960) idea of the 'holding environment', the attentive holding relationship between mother and child providing a sense of predictability and safety about the world is a good metaphor for the vital but largely unacknowledged emotional role the fund manager plays in financial markets. In parallel, adapting Bion's (1970) conceptualisation of the 'container-contained', the fund manager can also be viewed in the role of 'container' intuitively in touch with and bearing investor anxieties allowing them to 'feel understood', and thus more able to invest. Through the agency of the fund manager investors' anxieties can be contained and they are better able to deal with underperformance in the short or medium term while remaining invested for the longer term. In this way, investors can feel the future is manageable in some sense and can enter into the necessary emotional dependency relationship with the fund manager (Neri 2005) and trust him or her to look after their interests. Such trust 'trumps' anxiety and leads to the necessary action to invest in financial markets. In contrast, passive (or index) funds appear to meet no obvious emotional needs and we might speculate this could help explain why their take up is still relatively low at 20% of total equity mutual funds in the US in 2014 (ICI 2015, Figure 12.5, 46) despite in theory being the 'rational' thing to do.

From an emotional finance perspective, the important parallel psychological role the asset management industry plays in helping its clients save and invest in a safe way needs to be properly recognised. In this case, it would not be necessary for it to continue to operate in a divided state of mind collectively denying underlying reality. In an integrated state of mind, the fund manager is no longer required to act out the role of phantastic object inevitably falling short of meeting its impossible demands but can be seen as playing a key role in helping investors deal emotionally with the anxiety-generating uncertain future.

5.2. Excitement, anxiety and denial

According to investment folklore, the emotions of greed, fear and hope drive financial markets (see e.g. Shefrin 2002, 120–121). Nonetheless, this is a poor description of what really animates fund managers. The interviews conducted by Tuckett and Taffler (2012, 94–95) show what motivates real money managers is not greed but a quest for *excitement*, the search for and imagined pleasure in discovering the 'perfect' investment (or phantastic object). Also, it is not fear this section analyses but *anxiety* at the prospect of loss which is usually denied and repressed, and thus an even more powerful influence on actual behaviour because it is not thought. Finally, the term hope is used to cover *denial* of the fact that investment outcomes are uncertain. On some level fund managers 'know', but cannot acknowledge the reality that what they are expected to do is extremely difficult if not impossible, i.e. they 'turn a blind eye' (Steiner 1985). Hope veils denial.

Emotional finance thus views investors as not being driven by greed, fear and hope as often unthinkingly believed, but driven by a specific set of excitements, anxieties and denials. An understanding of the key role such usually unconscious emotions play in all investment activity needs to be incorporated directly in any theory that seeks to explain the real world of the fund manager.

6. Summary and conclusions

This paper suggests we can augment the understanding of financial markets and investor behaviour provided by traditional financial models and behavioural finance if we are able also to recognise more formally the integral part unconscious fantasy plays in all investment activity. The first part outlines emotional finance theory which draws on the psychoanalytic understanding of the human mind and group psychodynamic processes. It describes how investing provokes conflicting feelings of both excitement and anxiety,

and the emotional consequences of the investor having to engage in a necessarily ambivalent relationship with an asset that can easily let him or her down. Investment decisions can be viewed as being made in two oscillating states of mind termed *integrated* and *divided* with underlying reality, respectively, either acknowledged or denied, and with undesirable consequences in the case of the latter. How all financial assets can potentially play the role of exciting and transformational *phantastic objects* in investors' psychic reality in day-to-day trading activity, not just in asset pricing bubbles, is next explored. The article also suggests how markets can be viewed as virtual large groups driven by their own unconscious processes. It is very easy for investors to become caught up in excited and collusive *basic assumption group* behaviour involving collective denial of underlying reality with the psychic goal of making everyone feel 'good'. These ideas are then applied in practice in the following sections to help explain specific investor and market behaviours, asset pricing bubbles and related phenomena, and what the asset management industry is really providing.

Examples of how emotional finance can enrich our financial understanding and the way we think about a wide range of issues are provided. Illustrations include the unconscious meaning of 'risk' and the consequences of the associated denial of uncertainty, the vital role trust plays in all investment activity, potentially richer explanations of anomalous market pricing, how speculation and associated unconscious excitement help drive investment behaviour and the psychic meaning of retirement and its implications. In addition, the paper explores in some detail how the insights of emotional finance, including recognition of the key role played by the phantastic object and associated market-wide basic assumption group collusive denial of reality, can help explain the workings of asset pricing bubbles and financial crises. This more traditional economic and financial theories have great difficulty in doing because they ignore the crucial role unconscious processes play. Finally, taking an emotional finance perspective, the paper provides a coherent and theoretically robust explanation for the paradox the fund management industry constitutes and the 'real' role of the fund manager which is very different to how this is conventionally viewed.

Emotional finance is only at the very beginnings of its evolution as a coherent discipline. Drawing on the very well-established psychoanalytic understanding of the human psyche, its underlying theory is arguably already reasonably developed. The next stage is to explore the empirical application of emotional finance and this is where future work needs to focus. By their very nature, the workings of the human psyche are highly complex and not directly accessible to conscious awareness and direct observation. Extant research approaches in finance need to be extended and a more interdisciplinary perspective combining both quantitative and qualitative methodologies taken. Some illustrations of potential research approaches are provided in earlier sections of the paper and in the works cited.

One of the most powerful ways to arrive at what is important emotionally to financial market participants is the depth interview (Gaskell 2000) as illustrated in e.g. Tuckett and Taffler (2012). Despite its research intensive and inevitable small sample nature, this is a very effective way of understanding hidden meanings and motivations. Analysis of unscripted conversations and interviews with financial actors and even formal documents looking for parapraxes (Freudian slips) and other unconscious signals is another powerful approach to exposing psychic processes (e.g. Amernic and Craig 2011; Dikolli et al. 2016). Content analysis and associated narrative analysis is particularly useful in this context as well (e.g. Krippendorff 2004). The study of market-wide basic assumption group processes can be conducted using discourse analysis tools and can be potentially conducted empirically and systematically as the discussion and interpretation of dot.com mania and Chinese stock market bubbles in the paper suggests.

In fact, there is no reason to believe that *extant* empirical approaches are going to be any less powerful in exploring the basic propositions of emotional finance than, for example, in the case of behavioural finance. Predictions about individual and market behaviours based on emotional finance theory can be tested in similar ways even if it is not possible to put investors 'on the couch'. The whole realm opened up by recognising that investment is ultimately driven by excitement, anxiety and denial, with market-wide group processes equally key, leads to propositions about associated behaviour which can be tested empirically by constructing proxy measures for these emotions and exploring their dynamic relationship with actual trading activity. For example, the excitement and anxiety generated by investors' ambivalent object relations with stocks can be empirically explored using appropriate key word dictionaries as in Tuckett, Elliott Smith, and Nyman (2014) to content

analyse how stocks with different types of characteristics are portrayed by the media and the associated pricing implications.

Early work, in fact, shows some promise in terms of being able to measure the unconscious representation of stocks in the minds of investors using a range of proxy variables which appear to be priced by the market and are orthogonal to those of conventional asset pricing models (e.g. Fama and French 2015). Parallel work even suggests it is possible to measure the extent to which particular stocks (or even industries at certain times) might represent phantastic objects. This may help explain dramatic share price trajectories and, more generally, for example, such things as the market pricing of 'concept' stocks (e.g. Hsieh and Walkling 2006), 'celebrity' firms (Rindova, Pollock, and Hayward 2006) and stocks in 'boring' industries (Chen, Hou, and Stulz 2015). Similarly with the potential for measuring the impact of investor perceptions of firm 'trustworthiness' on its cost of capital which relationship emotional finance would predict.

Other work-in-progress shows how it is possible through empirical analysis of media reports using content analysis approaches and appropriate dictionaries of key words and expressions measuring powerful market-wide emotions such as mania, panic, revulsion, excitement and anxiety to demonstrate the ebbs and flows of fight and flight basic assumption group behaviours in bubble markets (e.g. Taffler, Agarwal, and Wang 2017). There is even the intriguing possibility in the future of being able to predict when market-wide defences will become overwhelmed and asset pricing bubbles begin to implode.

Importantly, there is the need to integrate the cognitive and the psychodynamic unconscious in our understanding of what is going on in financial behaviour (Epstein 1994). To date, cognitive psychologists and behavioural finance practitioners have not recognised the vital role unconscious fantasy and wish fulfilment play in judgment and decision-making. Behavioural finance is often, perhaps unkindly, viewed as a 'grab bag' (Hirshleifer 2015) or disparate collection of biases by its detractors. It may well be that emotional finance can offer a much richer and more coherent basis to help begin to explain the 'why' in behavioural finance and help provide some more formal theoretical underpinning and framework. In fact, it is possible to argue that what are conventionally viewed as 'cognitive' biases are in many cases driven by underlying unconscious processes well understood by psychoanalysts.

The basic premise in emotional finance is that knowledge of the subtle and complex ways our unconscious feelings, fantasies and needs determine psychic reality will improve our understanding of both how asset valuations and investment judgments are made, and how markets can break down. Investment decisions are driven jointly by emotion and cognition with most associated mental activity unconscious. Market-wide unconscious group processes equally play a vital role. This paper illustrates how a complementary psychodynamic perspective may help shed light on the reasons for and nature of financial activity and market behaviours not well explained by existing financial paradigms and models. In this context, it is even possible to speculate that in addition to their 'truth' value these latter may also be serving as unconscious defence mechanisms to alleviate anxiety by implicitly propping up the false belief that what is uncertain in reality is, in some sense, still predictable and manageable.

This article opened with 'rational' *homo economicus*, the idealised construct that underpins much of conventional economic and finance theory. From an emotional finance perspective, such magical atavars might also be serving on one level as a psychic defence against underlying reality and associated 'unpleasurable' feelings. The deeply wedded faith in economic rationality held by many academics and economic policy-makers could well represent an institutionalised (basic assumption group) way of unconsciously avoiding proper engagement with unwanted feelings of helplessness and impotence in the face of the inherently unpredictable. Arguably, the price of trying to keep any such psychic awareness at bay we see around us every day.

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