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Article

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Economics: The Open-Access, Open-Assessment E-Journal

Provided in Cooperation with:

Kiel Institute for the World Economy (IfW)

Suggested Citation: Tuckett, David (2009) : Addressing the psychology of financial markets, Economics: The Open-Access, Open-Assessment E-Journal, ISSN 1864-6042, Kiel Institute for the World Economy (IfW), Kiel, Vol. 3, Iss. 2009-40, pp. 1-22, <http://dx.doi.org/10.5018/economics-ejournal.ja.2009-40>

This Version is available at:

<http://hdl.handle.net/10419/28954>

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Addressing the Psychology of Financial Markets

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Abstract

The author suggests that the 2008 financial crisis was the culmination of an accelerating and inherently unstable process of financial market evolution. He argues that markets are not well organized to manage the power that financial assets have to generate emotion and their wider effect on human imagination and judgement, anchored in neurobiology. Judgements and decisions about risk, reward and the evaluation of success can become systematically compromised because the excitement of potential gain is disconnected from anxiety about potential consequences, producing groupthink and bubbles. When anxiety breaks through, a catastrophic loss of confidence is inevitable. In the aftermath the emotional pain that would be involved in accepting responsibility stands in the way of lessons being learned.

The author's theoretical framework is influenced by modern psychoanalysis and draws on an interview study of international fund managers in 2007. He suggests that underlying psychological conflicts have influenced the way market institutions have evolved to compete by selling the promise of exceptional performance. To cope with the expectations upon them, agents are impelled to base their actions on stories which overvalue opportunities and underestimate risks; this creates agency issues and facilitates the process of disconnecting anxiety from excitement that creates bubble potential. Policy implications go well beyond improving regulation and transparency.

Special issue

[Managing Financial Instability in Capitalist Economies](#)

JEL: G01, G18, G28

Keywords: Financial bubbles; financial crises; group functioning; groupthink; market instability; financial regulation; psychoanalysis; psychology

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The thesis to be sketched in this paper is that the 2008 financial crisis was the culmination of an accelerating and inherently unstable process of financial market evolution for which there had been many dress rehearsals—for instance, the asset price bubbles which *preceded* the end of the Technology bubble in 2000 and those preceding the 1987 stock market crash, the savings & loans collapse and credit crunch of the early 1990s, the 1994 Mexican crisis, the Asian financial crises of 1997 with the Russian and Long-Term Capital Management events of 1998, and the deflationary scare in the credit markets in 2002 after the collapse of the Texas-based energy company, Enron.

Factors external to financial market functioning such as trade imbalances, excess liquidity, the depression of risk premia, the search for yield and all the various specifics of the sub-prime affair were the immediate cause of the spectacular loss of confidence in October 2008.¹ However, I want to argue that its root cause is actually endogenous; it is to be found in the way human nature and human institutions have co-evolved in the formation of financial markets. Involvement in financial markets necessarily lets loose thoughts, feelings and behaviours that cannot be successfully contained and mitigated by the methods of understanding and organizing them that have so far been developed.

I will begin by summarising my previous work (with Richard Taffler) on how asset price bubbles develop because excitement about new prospects becomes divorced from anxiety about loss. I then introduce some psychoanalytic concepts relevant to this process and reflect on their utility. After considering how such ideas may or may not fit into existing economic approaches and methodologies I elaborate the main thesis, describing the features of the psychological experience of investing in everyday markets that I believe predispose those in such markets to take excessive risks. I will briefly locate these features within the structure of today's financial market institutions, as they have historically evolved. Finally, I consider some implications of these arguments.

1 Asset Price Bubbles and a Disturbance in the Capacity to Think

The development of asset price bubbles is very consistent and has been well described (for example, Kindleberger, 2000; Galbraith, 1993; Shiller, 2000). An object² of desire capable of generating excitement becomes the focus of attention. This creates feedback—price increase, increased enthusiasm, increased demand, increased prices and so on. The object's desirability then gets associated with a narrative rhetoric, generalised belief or covering explanatory story as in all mass movements (Smelser, 1962, 1998). The inventors are charismatically portrayed and considered as exceptionally clever. A kind of euphoric stage is eventually reached, at which point the pressure to join in becomes almost irresistible. In this stage those who doubt or criticise what is happening are dismissed, ignored, greeted with derision, or even threatened. It becomes adaptive to join in. Eventually unease sets in “*uneasiness, apprehension, tension, stringency, pressure, uncertainty, ominous conditions, fragility,*” wrote Kindleberger (2000:95). Finally there is panic and the crash, followed by an aftermath. In this final stage there is

¹ See, for example, the very careful documentation in the Turner report (Turner, 2009) and the speeches by Mervyn King in January (2009a) and March (2009b). See also Soros (2008), Shiller (2009) and Tett (2009).

² In the philosophical sense of an idea or representation, not necessarily a physical object.

a marked tendency to blame or even criminalise those who are held responsible, but it is also striking that there is no real effort to explore how everyone came to believe them. This tendency arguably also characterises mainstream economic theory. It is commonplace to explain bubbles in terms of regulatory errors, to build theories about external exogenous shocks or foreign influences, or even to argue they were quite “rational”.

From a psychoanalytically informed perspective the development described above is striking in that it comprises a rather obvious path-dependent emotional sequence in which a normal sense of the balance between risk and reward relationships undergoes several modifications.³ Whichever instance of an asset price bubble we may care to examine, what happens is that beliefs about what is risky, what is desirable, what is possible and what is likely, all shift in an expansive or excited direction under the influence of “a generalized belief” (Smelser, 1962) or covering story. The individuals concerned always begin to believe that something innovative provides exciting paradigm shifting opportunities—it is a “*phantastic object*” and individuals begin to imagine that if they get it they will have something exceptional and omnipotent like Aladdin (who owned a lamp which could call a genie); or like the fictional bond trader Sherman McCoy, (who Tom Woolf portrayed as feeling like a Master of the Universe). The excitement that follows is so intense that previously normal caution is usually lampooned or treated as a thing of the past, behavioural rules are altered and excessive risk-taking and excitability eventually reach euphoria. In this phase doubts are raised but dismissed or rationalised—exactly as appeared to happen when investment funds, bank managements and monoline insurers were given the perceived opportunity to increase yield by securitising loans in ever-increasingly complex packages. Then, after a period of fluctuating unease, unmanageable doubt floods in and the final outcome is panic. Those who are felt to have initiated the whole process are then invariably blamed along with anyone else who can be found. Guilt (that is, feeling bad because one feels personally responsible) is not evident; instead, blame is placed elsewhere. Eventually the original innovation, usually a good idea, becomes stigmatised to the point that it is hard to find anyone who will admit that they were ever a supporter. It is then argued that people didn’t really believe in the idea and if they participated it was because they had to. Eventually, if the stigma wears off, the idea makes a more ordinary contribution to human life. The fact that no one feels conscious guilt, i.e. no one feels responsible, makes it difficult to learn from the experience and to remember it; shameful experience is avoided and memory wiped clean. If any guilt is felt unconsciously, it is left behind in the form of uncertain and ill-directed feelings of delinquent resentment and anger against some vague authority. Such feelings may even help to spur the next incident.

Why does this emotional trajectory recur with such persistence? Why is it that professional investors bought dotcoms or mortgage-backed securities for their funds or invested so very heavily in the financial sector? Or why for that matter did they do so in funds run by Mr Madoff? Put another way, how and why did they and others form and maintain the belief that something akin to superman skill had *really* discovered a combination of exceptional return and low risk? In particular how and why did they and many others manage to maintain such beliefs in the face of at least formally diligent investigations and all the other paraphernalia of regulated investment process?

³ The argument here is taken from Tuckett and Taffler (2008).

I suggest that the answer is that situations of excitement and euphoria interfere with calculation and due diligence, even when these are attempted by very intelligent people with considerable knowledge and past track records of success. The decision-making that gives rise to and takes place in bubbles is possible because the “thinking” on which it is based is situated within a particular state of mind. In this state of mind, people are ready to embrace a story about unusually exceptional success; they are somehow caught up in the euphoria and this renders them unable to become worried or reflective enough to ask and answer thoroughly the questions that might uncover the potential risk of loss. These questions will of course then be asked later on in the panic phase (and so in a different state of mind) and will then be answered very differently.

From this viewpoint the issue is not lack of information about the new innovations, lack of transparency about the underlying instruments or lack of understanding (important as those may be) nor even new information later. Rather, the difficulty stems from the fact that information is processed in different ways in different states of mind. In the minds of economic actors what is “known” is “thought” about differently depending on the specific mental context. Accounts of asset price bubbles and related situations suggest that the individuals involved do not think for themselves but engage in *groupthink* (Janis, 1982). Groupthink is a form of group behaviour supported by decades of psychological research modelled on psychoanalytic understanding, which Irving Janis used to explain what happened in the Kennedy White House before the Bay of Pigs invasion.⁴ As it happens, Keynes (who was psychologically sophisticated) seems to be discussing much the same thing in his analysis of the difficulties of reaching independent judgement in anticipating future market developments. He recognised the tendency in markets to conform to the average and wrote “The Psychology of a society of individuals each of whom is endeavouring to copy the others leads to what we may term “conventional judgement” (Keynes, 1937:214).⁵

Groupthink is a feature of a what is termed a *basic assumption group* (Bion, 1952). In a basic assumption group, rather than processing information to reflect on risk and reward as external realities, which would lead to consideration of what could go wrong, individuals treat information from outside the group as background noise and feel secure by all doing the same thing together. Group members are afraid of feeling left out and are united by their belief in a supporting cover story. In recent times this was the idea that the new financial architecture had really changed the nature of risk. Banks didn’t need so much capital and returns could be higher for always. The nature of such cover stories is that they are new, complex, always rather vague and appear “clever”. As Shiller forensically showed in the case of the Internet bubble (Shiller, 2000) they do not

⁴ “I use the term “groupthink” as a quick and easy way to refer to a mode of thinking that people engage in when they are deeply involved in a cohesive in-group- when the members strivings for unanimity override their motivation to realistically appraise alternative course of action. “Groupthink” is a term of the same order as the words in the newspeak vocabulary George Orwell presents in his dismaying *1984*— a vocabulary with terms such as “doublethink” and “crimethink”” (Janis, 1982:9) Janis took his ideas about groups particularly from two psychoanalysts—Bertrand Lewin and the British psychoanalyst, Wilfrid Bion. Bion (1952) distinguished between *Basic Assumption* groups, which use groupthink, and Work Groups, in which each individual thinks for himself using the group to test and elaborate rather than to confirm. [Interestingly it seems financial analysts can be used in the same way.]

⁵ Note; it is not necessary to be physically present in a group to belong to it; it can be done in imagination. Moreover, imagined events have neurobiological consequences not that different from actual events of the same kind.

survive real illumination; but they can go on supporting actions for months and years until excitement gets overwhelmed by anxiety and panic ensues.

The pursuit of reward is tempered by the fear of loss; there is a potential conflict, which is felt emotionally as frustration, anxiety or something similar. From a psychoanalytic viewpoint the blockage to thinking in a basic assumption group indicates that the individuals within it are operating within a particular sense of reality which I will call “*divided*”.⁶ In this state of mind, rather than experiencing emotional conflicts directly we cut ourselves off from being aware of them—we make them unconscious and no longer feel frustrated nor anxious in any obvious way. We can then engage in potentially risky behaviour and be excited by it without any conscious awareness of being anxious about it or of having doubts or any other “bad feeling”. In a divided mind conflicting perceptions that could give rise to anxiety or frustration are “split off” from consciousness and so are not available to prompt thought.⁷

In particular, an individual in a divided state of mind cannot worry about the danger of treating a *phantastic object* as if wishes and reality are the same; wished-for reality is reality. When this way of thinking comes to be socially sanctioned within peer groups, individuals excitedly vie with each other to do just what they want with no thought of the consequences; to grasp the “phantastic” opportunity to break the rules of usual life and so turn “normal” reality on its head. In this state of mind, we start to feel that what was previously thought to be impossible or given up as childish or wishful thinking might happen after all.

For example, whereas 40 years ago British banks kept about 30% of their capital as cash reserves or equivalent which they could use to smooth over temporary shortages of liquidity without recourse to the authorities, by 2008 this was down to 1% (King, 2009b). The missing 29%, leveraged up several times, was lent out, earning revenue and paying exponentially multiplied dividends and performance bonuses, without any apparent fear for the consequences so long as regulation allowed it. There seems to have been no conflict. The old-fashioned, boring function of capital as security and reserve had almost vanished; as did suits and ties and coming to work on time during the Internet boom. In the minds of bankers and those investing in banks, bank reserves became treated as “lazy assets” held by unimaginative, boring, anxious, backward and probably elderly conservatives who were not switched on to modern methods. It was not only banks who did this or governments that stood idly by; individuals did the same thing. Thus UK households massively increased their indebtedness, as did others around the world.

Shiller, Galbraith, Kindleberger and others have made the point that when financial bubbles burst this is not usually because new information becomes available. Rather, what happens is that what has always been available to be known becomes salient in such a way it can no longer be ignored. When the dotcom bubble burst and panic set just weeks and months after numerous massively oversubscribed IPO’s, no news had become freshly available to provide any more secure predictions as to their futures. Similarly, in the 1987 crash no new knowledge had become available about the future. In the 2008 case, although it is obvious that the failure of Lehman Brothers sparked a

⁶ The correct psychoanalytic term is “PS” which alternates with D—see Tuckett and Taffler (2008) for a fuller explanation.

⁷ There is always plenty of small print and perhaps even due diligence. It’s just not salient.

significant new round of panic, the die had long been cast and the credit crunch had already been apparent for thirteen months. Above I quoted Kindleberger's comments about the period of unease that regularly occurs before a crash. Major crashes are preceded by a period of emotional oscillation as economic agents struggle not to believe what confronts them—as happened on and off between March 2007 and October 2008. Only when they are made so anxious that they can no longer avoid the doubts they have been hiding from themselves for a long time is the trigger moment reached.

In every bubble I have studied, a wide range of authoritative attempts have been made to warn economic actors to look very carefully at what they are doing, but these warnings never have any influence. This is another fact that we need to explain. I suggest that the crucial factor is that in the “divided” state of mind I have been describing, information that should create anxiety is blocked. Similarly, potentially worrying memories of similar past events take on no salient emotional meaning. So, in the years before 2007 there were many warning comments—from the IMF, in the Bank of England's Financial Stability Report or by Warren Buffet, for example. Moreover, the dotcom period was not far off and the collapse of Long Term Capital Management and numerous smaller examples of similar troubles had already created significant doubts about the mathematical models of theoretical risk underlying synthetic instruments for those that wanted to heed them. There were, for instance, doubts about the normality assumptions underlying risk modelling (Mandelbrot and Hudson, 2008) and awareness that there was no housing price data on which any reliable estimates of sub-prime defaults could be based (Tett, 2009). According to Taleb and Triana (2008) the entire risk management community had believed for some time that the mathematical basis of risk assessment on which all synthetic instruments rest was flawed.

The failure to heed warnings can be blamed on criminal motivation; large benefits have certainly been enjoyed, leading some to suggest that the situation we have been witnessing is criminal corruption. Tempting as such explanations are (and they have been made regularly in the wake of asset price inflations) I do not think it helps us very much to adopt them.

What happens during a financial bubble is not that a few people walk off with the loot (although they may) but that a dominant proportion of economic agents become a *basic assumption* group operating with a *divided* sense of reality. They then become a group incapable of using relevant and available information realistically to question the generalized belief that something “phantastic” is happening. They establish dependent relations with these very risky objects, with little or no apparent anxiety. In the absence of anxiety, it is possible to be misled by wishful thinking for a long time. Therefore, in order to come to a better understanding of financial bubbles, it may be helpful to consider the psychological process by which anxiety can become detached from excitement.

We can think about this by postulating that investors create imagined (mental) relations to stocks. When they commit to an investment strategy, they commit to an imagined relationship with consequences for reward and loss which induce feelings such as pleasure and pain—not unlike a marriage contract. Psychoanalysts postulate three principal kinds of imagined emotional relationships, governed by L (loving), H (hating), and K or –K (knowing or anti-knowing). In this view knowing is not just cognition but the creation of an emotional relationship with reality; because the

experience of reality often evokes feelings. “I love that stock” a professional investor told me about one success or “I hate it” about another and expressions of this kind are common.⁸ Love and hate are part of feeling desire, greed, envy, loss, and so on.

In the emotional trajectory of an asset price bubble “phantastic objects” are loved and later hated, but are unlikely to become “known” in the sense that their underlying reality is appreciated in and for itself. Should a “phantastic object” become known it may still be desired or highly valued but it is unlikely to remain “phantastic”; it becomes ordinary. To come to know the reality of people and situations that are important to us is to come to tolerate and appreciate them for what they are; usually causing us both pleasure and pain and so some degree of conflict—schematically, love and hatred for them. Thinking in this state of mind, where “objects” can be appreciated despite evoking conflicting responses and are pretty much “real”, implies some emotional maturity and can be called *integrated*.⁹ By contrast, in a *divided* state of mind, opposed, conflicted or *ambivalent* feelings towards people and objects are split into more or less entirely separated relationships of love and hate. In such a divided state of mind, we are freed from the awareness of reality and can almost exponentially exaggerate both a person’s or an object’s positive attributes and their deficiencies. We are then aware only of either our love for the object because of its extraordinarily good qualities or our hatred for it because of its perceived terrible faults. Maintaining this state of mind requires a great deal of unconscious mental work that psychoanalysts call “*splitting*” which is never absolutely complete—because reality keeps offering us data, we are continually forced to deny what doesn’t fit in order not to have to face the emotional consequences. The more extreme splitting becomes—the more phantasy is divorced from reality—the more anxiety in the form of physical symptoms, unexplained jitters or nameless dread may be felt, but it remains unconnected to its cause. *Splitting* thus lays the foundation for huge reversals in confidence or trust in people or objects, which can very quickly become feared and hated.

In a *basic assumption* group, any outsiders who think in an *integrated* state and make use of known facts to make “rational” and cautious choices are dismissed emotionally and actually, and tend to lose their jobs. Fear of this happening causes others to “adapt” and conform, and so fuels the process. Only when the anxieties produced by available information can no longer be *split off* and made unconscious will economic actors within *basic assumption* groups start to become overwhelmed by “jitters”. Their *ambivalent* relationship shifts in a reverse direction at the point when they are no longer able to dismiss their anxieties about it. Exactly the same information is now considered to be nothing but “bad” news. But before this point is reached, the pressure to join in is enormous, and ordinary reality is dismissed with extraordinary arrogance—as indicated by Chuck Prince’s famous remark in July 2007 about not being the first to leave the dance: “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....The depth of the pools of liquidity is so much larger than it used to be that a disruptive event now needs to be much more disruptive than it used to be...” (Prince, 2007)

⁸ See the description of the Leverhulme interview study below.

⁹ I am using the term “integrated” for the psychoanalytic term “D”. See Tuckett and Taffler (2008) for a fuller exposition.

An understanding of the nature of divided and integrated states of mind can help us to explain the difficulty with thinking about risk and reward during asset price inflation, why hatred, anger and blame rather than guilt erupt in the aftermath, and why these events all too often subsequently get forgotten. Throughout life our thinking oscillates between *divided* and *integrated* states.¹⁰ In an *integrated* state we think about people, ourselves and things more or less as we or they are—a mix of desirable and undesirable attributes producing mixed feelings in us, including guilt or remorse when we are not happy with what we have done. Such a “realistic” view of both ourselves and other people or objects of our thought allows us to experience the consequences of our or their imperfections, but also enables us to enjoy the pleasure of what they bring us or what we achieve. Feeling guilt requires us to engage in a painful process of working through to a recognition of the truth of events and our part in them. This is avoided so long as basic assumption groups are predominant and so long as individuals’ sense of reality is governed by a *divided* rather than an *integrated* state of mind.

After loss, we do not reach an *integrated* state of mind through panic and compliance but through the process of mourning—learning to accept bad news but only after we have tried to deny it, become angry, tried to bargain with reality and felt lost and a bit depressed. If acceptance is to happen at all, it takes time and feels painful before eventually providing the considerable relief that comes with acceptance of reality, which renders splitting unnecessary. Significantly, it is not possible to work through guilt so long as the “real” responsibility for the cause of the problem is felt to lie elsewhere. For this reason, while corruption and crime may be factors in causing asset price bubbles, as they are in many areas of life, I suggest we should not be diverted in that direction. Rather, we need to look at how a wide range of people were misled for so long and work to preserve our memories of it and our understanding of how this could have happened. What happened before the crash involved a whole system of financial intermediation well beyond banks. In my view this system is not well understood through current economic models and I want to show that in significant ways it remains largely untouched.

2 How Every Day Markets Work

The dominant model for understanding financial markets is founded on formal economic modelling based on the conventional assumptions of rationality and profit maximisation and supported by econometric work on price series. In essence the argument is (1) that no investor can beat the market and outperform except for a very short time or by luck and (2) that financial markets must be Pareto efficient—meaning that despite the fact of uncertain futures they allocate capital efficiently given available information and absorb new information efficiently as well. Financial bubbles are either “rational”, that is explained by necessary adjustments to new information, or the result of institutional failures to provide both the freedom and transparent information to let markets work properly. Leaving aside work in the Keynesian and Minsky traditions and also Shiller’s

¹⁰ Neither mode is inherently superior as both modes have survival value depending on the circumstances—a *Divided* state, for example, would be useful in battle or in situations requiring extreme endurance. The same may be true of *Basic assumption groups*.

thirty-year record of challenging the efficient markets thesis, which have been largely marginalised until very recently, this standard model has been the basis of economics and finance teaching worldwide. When central bankers and some economists gathered in Chicago in 2002 to discuss what they thought might be developing asset-price inflation, adherence to this model led them to conclude first that they could not be sure and second that they could not interfere. Despite a few dissenters, the consensus was that the market knew best (Hunter et al, 2005).

Standard models are questioned insofar as agency and information asymmetry issues are considered to upset the standard picture (see for example, Allen and Gale, 2000) and similarly by a growing body of work based on the behavioural economics tradition, deriving from the pioneering enquires of Kahneman and Tversky. They applied a range of established findings from the psychology laboratory to argue that because human economic agents are error-prone, financial markets cannot be fully efficient and so exhibit a range of important anomalies. One reason for the popularity of behavioural economics may be that it rationalises the finance industry. However, as Dow (2009) among others has pointed out, the behavioural theories have introduced a debate about how far it is reasonable to model economies on rational or non-rational behaviour and the extent and significance of financial anomalies. Nevertheless, because they have tended to treat rational behaviour, as defined and expressed by conventional decision theory, as the benchmark, such theories have essentially left the conventional model intact (see also Della Vigna, 2008).

Emotional finance, as represented by this contribution, is not easily encompassed within traditional perspectives. As elaborated above, it takes as one starting point the idea that economic actors make decisions in a context which includes their subjective experience through time. Decisions taken in one temporal context and therefore in one state of mind are expected to be quite different in a second temporal context in a second state of mind, even if the formal information available (data on return, risk, etc.) remains the same. More generally, agents are influenced by each other, treat prices as signals and can alter or even reverse preferences, according to context. These propositions about human behaviour are backed by clinical experience and, if the reader cares to engage in personal introspection, perhaps also by personal experience. They are also supported by the interview data presented below. Much more generally, they are consistent with the developing neuroscience evidence deriving from fMRI scans in which the context in which information is presented appears to be a dominant factor in decision outcome (for example, Berns et al., 2005, 2007; Engelmann et al., 2009; Stewart et al., 2006; Vlaev and Chater, 2006.). Additionally, the approach is also consistent with Keynes' not always well understood thesis about "animal spirits". His idea, based on direct experience of entrepreneurial activity, was to explain the fact that economic actors have a varying propensity to commit to long term investment decisions, by supposing that in inherently uncertain conditions formal calculation of expected future benefits, however carefully undertaken, will never be enough. Given this uncertainty, the decisions entrepreneurs make are ultimately always a leap of faith—possible because they have "animal spirits" or in other words because their feeling that they will be rewarded from entering a dependent relationship to their particular project is stronger than the anxiety induced by the thought they might make a loss. In the terms of the approach offered here, they overcome ambivalence. From this perspective Keynes (1936: 147 et seq) argued (a) that long-term decisions could never

be made on rational grounds alone and (b) that whether or not commitments were made would depend on the macro-economic and wider psychological context-sentiment.

Commitments to act based on “animal spirits” may be, so to speak, extra-rational, but they are not non-rational. I want to stress that while I describe the sequence of events in asset price bubbles as a path-dependent emotional sequence, I do not think it useful to argue whether behaviour was irrational or not, and I do not believe that the idea that markets can be understood through modelling should be jettisoned—far from it. To conclude that behaviour of the kind witnessed in bubbles is irrational not only implies that emotions and rationality are intrinsically opposed but in fact makes sense only if we conflate the rational pursuit of means-ends relationships *ex ante* with their outcomes *ex post* and so judge behaviour not from the viewpoint of the actor in the situation he found himself when making the decision but from the viewpoint at its outcome. We can all be wise after the event. As discussed below, the opposition of emotion and reason is now substantially contradicted by current knowledge in psychology and neuroscience as to the role of emotion in good decision-making and the confusion of *ex post* and *ex ante* is a methodological dead end.

The assumption of traditional economic rationality is not the only possible basis for modelling means-end relationships (Parsons, 1937). Approaches like Goldthorpe’s (2007) Rational Action Theory may provide a modern and more satisfactory alternative framework for analysis. Combining the interpretive and quantitative traditions in social science, his approach emphasises the relevance of the subjective context in which economic action takes place and argues that enquiry and subsequent prediction should focus on identifying the factors that help us to understand the influence of context on choice. A model of this kind makes space for more variability. Actors may only consistently select the same ends and means if they share the same context. If a variety of contexts shaping ends and means are empirically identified, then behaviour in the different contexts may be patterned and relatively predictable; contexts may be determined part institutionally, part socially, part psychologically and part neurologically and specified and weighted as empirical findings dictate. It is in specifying context that we can introduce the main ideas just discussed: phantastic objects, unconscious conflict and ambivalence (see also Smelser, 1998), integrated and divided states of mind and “groupthink”.

In an exploratory study I conducted in the first eight months of 2007 funded by the Leverhulme Trust.¹¹ I visited one group of key players in financial markets; fund or portfolio managers. The aim was to understand their task and their decision-making in their context and from their point of view. They were based in the UK, US, Europe and Asia and between them they controlled over \$550 billion of client investments.¹² Their firms controlled many times more. This was the first research effort to talk to asset

¹¹ I interviewed 53 highly experienced and senior fund managers working for 16 asset management houses in Boston, Edinburgh, London, New York and Paris. As luck would have it the timing of these interviews could not have been more opportune. They took place at the very time we now know was characterised by excessive risk-taking. Findings will appear in Tuckett and Taffler (forthcoming) and in Tuckett (forthcoming).

¹² The managers interviewed had more experience, more authority and had survived longer than most fund managers who do not typically have a long life in their jobs. Many of them were heads of teams of ten or more other managers. They are probably more likely to hold stocks over the long-term, less likely to gamble and more appreciative of risk than those with less experience. Findings from this group are likely to under-estimate the extent of the different problematic issues to be discussed.

managers¹³ in formal interviews using methods developed in medical sociology and psychiatric epidemiology which rely on a standardised non-schedule interview technique (SNSI) (Brown and Rutter, 1966; Brown, 1978; and Tuckett et al, 1985). Interviewing has been shown to provide a useful and rigorous alternative to laboratory techniques, especially when, due to experimenter effects and practical considerations, observations conducted away from the locus where actions take place have low external validity. The strength of the SNSI approach is that rather than inventing artificial activities for experimental subjects to undertake, it provides considerable scope to cross-question, test and explore actual decision-makers' accounts in a naturalistic conversational setting.

Each interview covered a series of topics. Managers were asked to describe how they understood their task and asked to talk about some specific decisions they were satisfied and not satisfied with which they had made in the previous twelve months. Interviews were recorded for later analysis and coding by third parties. The main potential methodological objections in such situations are that coding is not reliable and then that data selection is biased. The main safeguard, therefore, is to address coding issues by using systematic and transparent methods and to address selection issues by employing randomisation; inferences can be supported by presenting randomly rather than conveniently selected quotations, allowing for peer review to judge the supporting data. It would be a mistake to assume interview data is mere rationalisation. That could matter for some purposes, but in this case interview data is intended to capture the accounts actors give of their decisions in context—which is what we want. Narratives are developed by social actors as part of taking decisions and also used in anticipation of justifying & supporting decisions; perhaps for years afterwards (see Wright Mills, 1940). The stories we tell support the meaning we give to life and emotionally fortify us for action—much as Akerlof & Shiller (2009) have recently suggested for stories about the Internet as an information super highway or about securitisation as providing such deep security that banks could reduce capitalisation to infinitesimal amounts.

The fund managers interviewed had to make decisions to buy, hold or sell various classes of assets and so to build a portfolio. They are one of several types of financial intermediaries and typically operate under a particular legal mandate. Their decisions are based on information gleaned from wherever they can get it; discussions with enterprise managements, visits to factories, inputs from in-house financial analysts, quantitative 3rd party screens, broker's tips, in house risk specialists, economists and many other specialists. Their industry has expanded exponentially in the last 50 years and the salaries they are paid have too. Sometimes they double as analysts or otherwise depend on analysts specialising in understanding different industrial and commercial sectors in different parts of the world. They attempt to digest the mass of resulting information produced by their immediate advisers and other groups of intermediaries about each asset they consider owning and alternative opportunities. Once they decide to buy or sell to implement their strategies they generally employ brokers (often in house) who then employ traders (also sometimes in house) actually to make deals and "back office" staff to record and reconcile what happened. Whereas traders operate with very short time frames of minutes, hours or days, fund managers mostly aim to hold

¹³ Smith (1999) conducting a pioneering study using more informal methods and Simon et al (2009) have recently conducted 60 interviews in 26 hedge funds and 8 brokerage firms across Europe, the United States and Asia.

longer—even if in some cases they are also able to short sell stocks or other situations they consider to have poor prospects. Hedge fund managers, included in the sample, may perform several of these roles.

Only some broad outlines of the findings from the interview study can be mentioned here. They describe the informational and institutional context in which fund managers work and the inherent conflicts to which they are subjected by the nature of these contexts and by three well known and fundamental, but nonetheless hitherto largely overlooked, characteristics of financial assets.

A first significant characteristic of financial assets is that they tend to be volatile; that is, they have a potential for very large increases or decreases in value at any time. They can become worth nothing. This characteristic (in fact the focus of finance theory from Bachelier (1900) to Black and Scholes (1973)) has considerable power to generate primitive impulses and emotions within an individual's subjective experience of time—impatient greedy excitement about potential reward and panicky anxiety about potential loss. Think of a gold rush. The experience of time evokes both impatience and doubt; maybe it will just be fool's gold. The point is that as time passes, the assets people do or do not own (or which they watch others obtain) generate the most powerful human feelings; principally triumph, elation, and omnipotence or hate, guilt, sorrow, and envy.

As just mentioned, feelings are not a sign of irrationality. They are part of our human adaptive capacity. Feelings and their biological correlates motivate us, help us to think and make life meaningful. Modern psychological and neurobiological understanding treats emotion and emotional intuition not as eruptions of irrationality or signs of weakness but as core drivers of our capacity to live. Those theorists who model decision-making as solely conducted through calculation by individuals with infinite resources and processing power overlook such facts of human experience and capacity.

Thus, while any investor may try more or less to the best of their ability independently to calculate the future, it is a part of that calculation that they imagine and anticipate and have feelings about what they anticipate, as well as observing others and having more feelings about their observations. Without feeling the activity actually has little point. Moreover, thinking about future rewards and risks of loss means telling stories to oneself and imagining relationships and outcomes. In fact, neurobiologically speaking, phantasies are close to being as real as our lived experience, in the demonstrable sense that in experimental situations involving Magnetic Resonance Imaging (MRI) our phantasies can be observed to produce electrical and chemical activity in our brains that is pretty much the same as would occur if we actually lived them out (Bechara and Damasio, 2005, also Zweig, 2007). Such imagining is conscious and unconscious and felt so that decision-making draws on intuition and gut feelings as well as on powerful evolutionarily programmed heuristics—such as the recognition heuristic or the “not breaking ranks” heuristic (Gigerenzer, 2007).

A second key characteristic of financial assets is that they are abstract and cannot be enjoyed for themselves; they have no value other than what they can be exchanged for. Purchasing a financial asset, therefore, is not experientially like purchasing a consumer good such as a television. In purchasing a television, a “rational” consumer can consult a range of information about price and quality and on that basis make a decision. After taking his television home he can then enjoy it. Afterwards the price may go up or down or new superior models may arrive. Such events may cause regret in the coming weeks and months but the television is there to be used and if the purchaser is really upset he

can sell in the second-hand market, take a loss and buy the newest model. The situation with financial assets is different. Not only do they have little intrinsic value, but their value is inherently connected with time. Financial decisions continue, start or end a dependent relationship which can cause reward or loss. That relationship is based entirely on an intrinsically uncertain view of the asset's expected value in the future; the exchange value of financial securities being represented by symbols on paper or by an impermanent flow of numbers on a screen. Prices can and regularly do go down as well as up—in fact volatility studies show they are likely to go down at least half the time. The asset may not only disappoint but seriously lose value or even come to be worth nothing. Decisions to make and maintain a relationship with such objects therefore depend on an individual's ability to maintain conviction as to future expectations. Moreover, trading frequently (nervously) is expensive and likely to destroy any gains. This means that when new information about better or worse opportunities arrives, the buyer will have the experience of watching his cherished investment struggle, which he must tolerate while all the time knowing there may really be reason to sell. In a sense the original decision to buy has to be made again and again and again for as long as one holds the stock—which creates an experience through time with which individuals must cope. Financial market decisions invariably involve highly ambivalent and stressful emotional experiences and take place through time in conditions of inherent uncertainty.

The third characteristic of financial assets is that it is extremely difficult to draw any secure conclusions about whether an investor's efforts in buying, holding and selling them have been successful. The range of variables and time periods involved make assessment and feedback, whether about one's own performance or that of others, unreliable. Good performance in one period is rarely a good guide to that in another and in financial markets it is extremely difficult to distinguish reliably between the operation of luck and good judgement. As in gambling, short-term experiences of apparent success or failure and the resulting excitement or anxiety may be quite misleading. Such factors pose major problems when a professional investor or his or her clients try to assess whether he or she has really done well, particularly if the costs of professional management are taken into account (Kay, 2009). Such facts are particularly significant because human evolution based on natural selection has not only given us the psychological capacity to split excitement and anxiety, risk and reward, but has also programmed into our neurobiological functioning chemical reward structures with profound consequences for unconscious learning. Secretions of dopamine in our brains can addict us to apparent success and the secretion of other chemicals when faced with apparent failure can make us flee. Both effects are observed when we imagine success or failure as well as when they actually happen. The overall effect is that experiences of success can very quickly turn into those of failure; the edifice of confidence can disappear very quickly.

Fund managers take their decisions in the context of a global asset management industry that has changed very rapidly since the 1980's due to financial de-regulation. This context is characterised by intense competition between intermediaries for the billions of dollars in fees that are attached to fund management.¹⁴ The very large

¹⁴ As Samuelson is reported to have observed in 1967 “there was only one place to make money in the mutual fund business — as there is only one place for a temperate man to be in a saloon, behind the bar and not in front of it . . .so I invested in a management company” (Quoted by Bogle, 2005). Whereas fund

financial corporations who control this market apportion huge resources to promoting their funds and (notwithstanding both the conceptual difficulty in making the claim and the paucity of available evidence) have mostly decided to base their appeal to investors and trustees on claims about their past record of achieving exceptional performance.

This need to advertise exceptional performance—reflecting the excitement and greed that financial assets generate—is a very significant determinant of context. Most managers are paid bonuses based on their annual performance. This creates an emotionally highly loaded institutionalised context for fund managers' work. Their interviews made it clear that they felt under pressure to perform exceptionally, even though to believe that it is possible to do so in any sustainable way in an inherently uncertain but also highly competitive situation flies in the face of standard economic and finance theory.¹⁵ Their situation is therefore, paradoxical; by simple arithmetic, those I interviewed knew that only a few among them could be exceptional. One conclusion is that the institutional situation in which fund managers find themselves will facilitate a divided state of mind. This is evident in the way funds are promoted—for example on London buses and tubes. Claims are made in large print about exceptional performance in the last year or so, but with regulator-mandated remarks in small print about how it is unreliable to extrapolate performance from one year to another. But asset management companies do not advertise all their funds and understandably do not draw attention to those that have done badly. They usually amalgamate such funds into new funds when this happens, so that statistics exhibit survivor bias.

In keeping with their institutional context, it was very clear that the fund managers I studied were under pressure to search out (ahead of others) investment opportunities which they could believe were exceptionally interesting and profitable. The task was particularly challenging and potentially anxiety-provoking because although finding an exceptional opportunity was exciting, they always had both far too much and far too little information to determine future value and risk in any certain way. But, like Keynes entrepreneurs, they had to believe and get others to believe that they could regularly obtain and maintain information advantage over others, and they had somehow to feel convinced enough to overcome doubt. Another of the characteristics of financial assets mentioned above was relevant; not only did they have to find situations which they thought were exceptionally interesting and act, but they also had to hold on to their beliefs for the necessary time period for the underlying thesis to come true. In order to do this (to make the leap of faith) they needed to feel a degree of comfort; in other words they had to build what they could feel was a defensible conviction in their own judgement, which would last over time. The volatility of most financial assets is a fact; indeed they were counting on price changes in their favour. To build up the necessary confidence, to inspire confidence in others and to maintain a mentally committed relationship to their investments, fund managers had to be spurred by excitement at the prospects of the rewards that they imagined. They also had to insulate themselves

performance is uncertain management fees are guaranteed. They will have been payable even over the last 24 months of falling prices and reduced wealth.

¹⁵ One appeal of behavioural finance to finance professionals is that it rationalises the notion that there are exploitable anomalies to be had from those who are “rational”. The idea lies behind many hedge funds as I did behind Long Term capital.

against potentially inhibiting doubts about loss giving rise to anxiety, which otherwise might prevent them from acting.

The major finding of the interview study is that fund managers gained confidence by developing both general stories to explain their general strategy (stories which allowed them to feel comfortable about ignoring some of the masses of information to which they were subjected) and specific stories that enabled them to feel both excited and comfortable about each individual decision. These stories involved weaving facts together within an imaginative context that made emotional sense—that felt true. The specific stories managers told me about the individual securities they chose to buy, sell or hold, were thus woven to legitimate the sense that their choices were linked to their general strategy as well as having a reasonable chance of working out. They had to create the emotional conviction both to allow them to tie the initial knot when making the investment (involving them in a dependent relationship) and then to allow them to tolerate impatience and doubt so that they could remain attached to their decisions for the length of time necessary to let things work.

It was evident from the stories they told that on the one hand they were able to believe that purchase of a given stock was desirable because the stock itself had exceptional qualities in that its true value was not recognised, its amazing potential was not understood or that those in charge of the companies were exceptional. On the other hand, other features of the stories suggested that managers believed they had somehow got potential downsides covered.

Thus, on the one hand they frequently described themselves quite spontaneously as getting excited by companies, liking companies and even loving them and also implied that their relationship to them was special to the extent of being at least semi-exclusive. They had found and owned something exceptional, which others knew less about, or to which they at least had more privileged access. Stocks were regularly described as “sexy”, “spectacular”, and “exciting”, or on the other hand as “unfancied”, “dopey” or “boring”. Those that disappointed had clearly once also had such characteristics but now caused the disbelief, anger and hatred that goes with wanting someone to blame. Often this was levelled at company managements.

On the other hand, stories also appeared to be constructed to help the fund managers to manage anticipated doubts and distrust; they were claiming, therefore, to see something that others had not and knew they would have to go on believing in that through time. To achieve such confidence, the companies they bought were said to be protected against the possibility that things might go wrong, that expectations might not be immediately rewarded or that managements might destroy rather than enhance value, or just against fears that the stock would perform in an unexciting way. Many stories, in effect, both reported reasons for being excited and reasons for feeling secure within a situation of inherent distrust. Reflecting on these stories, it is apparent that in effect fund managers found ways to believe that the stock they purchased could get higher rewards with little or no extra risk—or to put it another way, that they were in at least some measure “phantastic” objects, exceptional stories offering above average rewards but with only ordinary risk.

Some very preliminary additional interviewing suggests that what is true for fund managers seems very likely to be true for their clients and the consultants to those clients. They too hope to achieve “phantastic” performance and probably search out the “star” fund managers whose stories they think are exceptional. In 2007 “hedge funds” and

“private equity” were the magical ideas. A senior adviser to a leading international asset gatherer told me he is accumulating statistical evidence to show that the allocation of trustee funds to particular management companies bunches in bubble like patterns.

Bearing in mind that in a bubble period of financial instability decision-makers see exciting opportunities rather than risks, the stories fund managers tell are especially pertinent. The study suggests that managers are predisposed to find stories that overvalue opportunities and underestimate risks as they try to cope with the need to fulfil their clients’ expectations that they can deliver exceptional returns. In order to cope, they need to find ways to believe they can get higher rewards than their rivals from the particular investments they choose; this means that they are constantly on the look out for the fantastic or for signs that others have found it. One might say that in order themselves to be seen as “fantastic” they are naturally attracted to seek “phantastic objects”; in extreme cases Internet stock, tulips or stocks benefitting from the higher than usual returns from securitised mortgage bonds.

If such findings are generalised through the professional investment community, it seems likely that *as a group* they tend to share an unconscious “basic assumption” that the “phantastic” is out there and achievable if only they can find it. In this way it seems that financial markets are continuously vulnerable both to becoming overexcited and to under-estimating risk; the twin factors, together with self-fulfilling technical effects, which produce asset-price bubbles. From this viewpoint financial asset bubbles are an emergent path-dependent property of a particular institutionally-based set of interactions between human beings chasing *phantastic objects* and individually enacting their given roles quite rationally.

Because they are felt to be so exciting, *phantastic objects* upset thinking about investment decisions that realistically balance risk and reward. But the balance can also be upset by thinking processes that influence the perception of risk and underestimate or shift it. Although different managers among those interviewed spoke in different ways and their strategies gave them different perspectives on it, each particular take on the potential losses to themselves, their firms and their clients that they imagined as a consequence of their decisions showed how risk—which for these fund managers was the danger that information asymmetry, uncertainty or client ambivalence would upset their future plans—was present for all of them. To a greater or lesser extent they all worried about the accuracy of the information reaching them, its sources and reliability and what it was they didn’t know. They also had to worry about what they had done with the information they had and what they might or might not have over- or underestimated. It was in this generalised context of “worry” about error that they had to respond to new information daily. This is why it may be important that any theory of financial markets recognises the difference between ordinary consumer markets, where goods are purchased more or less once and for all in a single decision, and financial markets’ market assets where the decision to purchase must implicitly be made day by day as new events and new information reach the decision-maker. All the time managers had to assess the meaning of what news reached them and had to imagine what others would think and what the future would hold. They had, therefore, constantly

to be mindful of the impact of potential threats and alternately to consider the upside and the downside they might produce.¹⁶

Is today's news or this month's earnings figures or fund manager performance data a blip of little consequence or an early warning of trouble to come *in the future*? We can guess, extrapolate, argue, or imagine but we have to wait to see how things will work out. Respondents in the sample looked at their performance data on screen very frequently, in a way that was inconsistent both with their long-term strategies and such knowledge as we have about price volatilities. It was also most striking that many respondents referred directly or indirectly to the possibility of capitulation and to the difficulty of holding their nerve. Capitulation follows a period of what one fund manager called torture as he described the pressure of waiting to see if a thesis would play out. It follows that the experience of time, an emotional experience, is central to making decisions involving potential loss and awaiting their outcome, just as imagined excitement and anticipation is central to the idea there may be gains.

Waiting is an experience that we learn to cope with. One way to do that is by being aware of anxiety and using it to be curious about what might be happening, but another way is by using anti-thinking mechanisms to feel comfortable in a difficult situation. Preda (2005) has described how speculation and gambling gave way to investor "science" in the 19th century, after which investing became more respectable and more widely followed. Perhaps one reason why financial markets have relied on economic and finance theory and modelling is not for their "truth" but for their comfort value—such theories are an aid to comfort in the sense that they can be used to tell a story that appears to map the future and make it feel more bearable. Certainly one explanation for the attraction of statistically derived risk measures, benchmark tables, and much of the welter of comment, analysis and statistical reporting of all kinds that constitute the financial market industry is that it is a way both to manage anxiety and to create the impression that risk is being managed. Such stories disguise the fact that in many ways we have not come very far from the casino.

In a *basic assumption group* anxiety is split off to enable the group to feel more comfortable. In such groups information is used ritualistically for that purpose rather than, as in a work group, to be curious and to discover. Since the 1990's an industry of formal risk management techniques have been very widely introduced into the management of many enterprises as well as banks so that even small UK charities have to have a risk management strategy (see Power, 2005 and Zorn et al. 2005).

Work groups are the antithesis to basic assumption groups. Whereas in a basic assumption group it is important for everyone to think the same and difference is felt as a threat; in a work group each individual arrives at a judgement independently. Risk and other metrics (like AAA bond grading) in a work group are not used ritualistically; rather they can be used to begin an exploration of what can go wrong and prepare the ground for judgement.

Recent events in financial markets suggest that a great deal of activity has been intended not to investigate risk or performance but to secure comfort; suggesting basic assumption group phenomena have been active and that clients and professional investors have not properly been able to experience the danger of excitedly splitting

¹⁶ The future never arrives for any of us until we are dead. But this is especially true for the fund manager. When things go unexpectedly they have to think some more. And so on.

reward from potential loss; so that a predisposition to asset inflation would be accentuated without awareness of risk. Here is one more reason why I consider the root cause of current difficulties to lie in the nature of financial assets and the conflicting emotions and states of mind they create in the context of the way financial market institutions have developed.

3 Implications

The understanding set out above, which can be termed an emotional finance perspective, requires further substantiation through additional and more thorough empirical enquiry of the situational context in which financial market decisions are made. Possibilities exist to link more rigorous and developed interview surveys to hard behavioural information from detailed analysis of daily data tracking fund manager trading and performance. Further developments in psychology and neurobiology in the future will tell us more about the basic science context of decision-making.

Based on current knowledge the emotional finance hypotheses set out above are plausible, and if accepted they have significant implications for the economic theory of financial markets and for public policy. To summarise: emotional finance agents are understood to use their imagination, gut feelings and various available heuristics to act rationally but with less than fully anticipated consequences, depending on several aspects of context. Financial markets have developed long chains of agency relationships in which agents are incentivised to meet immediate objectives. A central feature of this context is an institutional environment where managers are expected to perform exceptionally and are heavily rewarded if they do so. Competition for assets is based on this expectation, which is already a symptom of a divided state of mind at the heart of the market; insofar as they play along with the unreality of everyone claiming to be exceptional and hide information to the contrary, asset management companies, fund trustees and advisors tend to operate in silos that cannot question the overall situation and so function as a “basic assumption group”.

The central point is that expectation of gain and fear of loss are very easily divided and disconnected. When what appear to be exceptional opportunities are presented to actors the issue is whether they are “really” able to anticipate and imagine experiences like disappointment which might lead them to forego short term excitement for fear of longer term pain. This situation is further exacerbated by evidence that those who say “no” tend to underperform in the short or medium term. To avoid being penalised, agents find ways to rationalise. To cope with the expectations upon them, they are impelled to base their actions on stories which overvalue opportunities and underestimate risks; facilitating the very process of disconnecting anxiety from excitement which creates bubble potential.

Agency theory approaches some of these issues by suggesting that problems can be remedied and equilibrium rescued by information transparency and the proper alignment of incentives. One of the most fascinating aspects of financial markets is how this type of approach has led them to become increasingly transparent but also increasingly confused by what to do with the information they have; examples are quarterly reporting, concrete applications of risk formulae, moment-by-moment availability of manager performance statistics, fund league tables, advertisement of

tracking error as a basis for mandates, etc. The evidence of the interview study is that these make things worse. Some of them (for example, company quarterly reports, risk formulae, betas, agency ratings and tracking error) have been more reassuring than validly informative and are little better than noise—it is characteristic of a basic assumption group that information is not used for thinking but treated as reassuring noise. Others (fund league tables, manager performance statistics) raise excitement levels and increase pressure, making it harder for managers to hold to their decisions, particularly given volatility in the market. Bearing in mind the three central characteristics of financial assets mentioned (volatility, abstraction and the difficult in judging successful performance) I conceive these efforts as driven by responses to the inherently irremovable conflicts they create; produced in an effort either to manage or exploit emotional responses to uncertainty.

The characteristics of financial assets mean that financial markets will always tend to be subject to greed, over-excitement, anxiety and panic and divided states of mind. Financial markets produce subjective and neurobiological experience which along with the organisation of institutions and the basic characteristics of human social actors creates the context for decision-making.

Looking to the implications for public policy, it is manifest that the market cannot be left to itself. The challenge is how to influence the context of financial markets so that financial markets work as economists model them; treating economic theory not as true but as providing a normative framework for how things could work (see also Kay, 2009); one of the first lessons of which is to be alert for unintended consequences.

Looking to regulatory activity the issue is not how we prevent greed, excitement or dangerous financial innovation but how to organize markets to benefit from these human characteristics and to mitigate the potential effects. My argument is that over the last two hundred years or so financial markets have been increasingly organized not so much to mitigate the power financial assets have to generate emotion and their wider effect on human imagination and judgement but to amplify it in uncontrollable ways. Amplifying excitement is highly seductive and attractive. Financial markets and financial life—much of which should not exist according to standard theory—have a larger and larger place in society and culture and have been generating more and more excitement. The present context of the asset management industry organised around promoting the unrealistic idea that managers can be exceptional and also sustainably discover the exceptional, is stimulated by and stimulates beliefs in the phantastic.

Judgements and decisions about risk, reward and the evaluation of success have become and will tend to continue to become systematically compromised unless the institutional, social and psychological context for financial decision-making can be modified to prevent the excitement of potential gain becoming disconnected from the anxiety of potential consequences; producing groupthink and bubbles. Once bubbles get really well established, agents find ways to leverage their exposure and debt builds up so that there is no soft landing.

Given the number of suggestions that have already been made to prevent future crises, I restrict myself to sketching two ideas, aiming to indicate the implications of an “emotional finance” approach.

The first proposal is that regulators should work with the asset management industry to make fund management appear more boring; attempting actively to reduce the impression that financial investment will make people rich to an exceptional degree.

They could outlaw advertising investment funds on the basis of exceptionality and make it illegal to attempt to distort reality by excluding details of underperforming funds, etc.

A second proposal is that central banks or other bodies (at national and international level) should devote significant resources to regular “temperature” checks in all asset markets. These checks, the purpose of which is to counteract the tendency to develop divided mental states, should include looking for price movements in assets (including derivative trading) which appear to be heating up, indicating the potential presence of new “phantastic objects”. Indicators should include assessments of the “mind of the market”. The “thermometer” results should be regularly published and accompanied by strong warnings where indicated. Under certain warning conditions authorities should be empowered to take action—i.e. for instance to restrict financial innovations (treating them like new medicines), to increase capital ratios or to limit lending.

King (2009b) makes the significant point that it is asking a lot to expect regulators to be exempt from the inflationary processes everyone else is infected by and points out just how unpopular imposing counter-cyclical constraints would have been in 2005 or 2006 given the costs they would have imposed on the financial sector—no doubt opposed as a tax on success. This view is plausible and lies behind my suggestion for an ongoing thermometer of the market’s mental state similar to the retail price index. It would take time to get established but there probably is time before another major incident. From an emotional finance viewpoint the design and creation of future regulatory regimes to develop counter-cyclical policies for asset price inflation, bank capitalisation or debt ratios will be troublesome if developed in a divided rather than an *integrated* state of mind. The former leads to an exciting kind of “Tom” and “Jerry” enactment in which the creators of financial innovation and financial products seek to “get away with it” while regulators seek to pursue them and constrain them to gain the upper hand; a *divided* state. Because the inventors and purveyors of financial products are innovators, most of their products at least initially have widespread benefits. Financial derivatives do facilitate. The capacity to innovate (and admiration for it) is powerfully built in to the human psyche; any effort to introduce limits will stir powerful emotional and then political conflict. Such forces stimulate divided states but can be managed in an integrated state—one tempered by the knowledge of what has gone wrong and the need for some degree of balance between the risk of some loss due to constraints and the risk of catastrophe if there are none.

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