To Referee 1:

Thank you for your comments and for drawing attention to some difficulties. I will shorten the final part and endeavour to address some of the other issues in a revison, shortly.

To: Referee 2.

Thank you for your comments and reflections.

As you surmise this is not a paper that attempts to make any formal demonstration or to report supporting data. In terms of economic journals today it may be right to classify it as an essay. The intention was to open up a new way of thinking about financial markets based on a perspective which is likely to be unfamiliar. Beyond that I hoped to begin to engage in exploratory interdisciplinary discussion.

A main question you raise is as to whether the "story" is compelling – and more seriously as to whether stories can be told in different ways to produce different conclusions. This is a serious problem in social science but not an unfamiliar one. Part of the difficulty expanding the scope of economics is based on the fact that a discipline based on formal reasoning (deduction) from premises has to adjust considerably if it is to engage in inductive enquiry. Once that step is made and if the kinds of hypotheses I suggest are to be entertained then a variety of ways of choosing between different arguments have to be introduced. The alternative is to take the view nothing can be said, which is perhaps essentially why asset-price inflations have tended to be ignored or treated as entirely exogenous. But that is a bigger subject.

To answer your objections more directly.

First, the first nine pages, based on the paper in the *International Journal of Psychoanalysis*, draws attention to what I believe are widely agreed and frequently repeated empirical facts abut the different observable stages of an asset price bubble and suggests that it may be interesting to recognise them differently than hitherto; namely as following a <u>known emotional trajectory</u>. Once that step is taken certain quite standard psychoanalytic ideas are easily introduced to explain the trajectory. Although this is quite obvious to a clinical psychoanalyst who thinks about it, it has not previously been considered. In economics the focus on whether (or not) behaviour is rational and whether markets are then in equilibrium has take up so much energy as to distract from other questions – yet all accounts of asset price bubbles make it quite obvious to non specialists that what is at stake includes emotion. The concepts of wishful thinking (phantasies), ambivalence, splitting, integrated and divided states of mind and groupthink (basic assumption groups) are then introduced. These are standard clinical concepts from another discipline and beyond the scope of this paper to have to justify. They either illuminate or not. (Groupthink is used widely following Janis but if you read his book he is quite clear where it came from.)

[Gillian Tett's detailed account of the JP Morgan group's development of Collateral Debt obligations and the various synthetic variants has come out since my paper was prepared (Tett, 2009). The dynamics show the same emotional pattern but interestingly show how the JPM group (who were largely responsible for developing the various instruments) specifically decided they could not reliably be applied to mortgage finance – with deep regret (i.e in an integrated not divided frame of mind). Their conclusion was that two problems would come up and could not be overcome – what to do with the problem of rising levels of super senior debt and the lack of adequate historical housing price and default data to model the risk. Other banks ignored the problem and JP Morgan then underperformed with all the pressures and incentives to join the herd.].

Second, the next six pages elaborate and set out an argument about “every day” markets mainly based on the research interviews I have done with fund (portfolio) managers which is in preparation for publication in two books. Readers of the current paper are obliged to accept assertions I make about this data namely that it shows (1) that buying, holding and selling financial assets is an experience which lasts through (and so varies during) time; (2) that the experience is strongly influenced by the culture of asset gathering marketing exceptional performance; and (3) that the experience generates excitement about possible gain and anxiety about possible loss and that managers create stories which have the effect of convincing them they have found exceptional (phantastic) opportunities where the risk-reward calculus is unusually favourable. The data results from the rigorous analysis of properly constructed interviews but I cannot present it here. What I argue is that this empirically verifiable (ambivalent) situation makes economic actors highly prone to “splitting” and to coping with “divided states of mind” and so predisposes financial markets to asset price bubbles. I further argue that the experience in time of some of the inherent conflicts faced by managers (uncertainty of various kinds) leads to coping strategies leading to increasing short-term anxiety driven practices – league tables, formal risk measurement metrics, quarterly reporting, hourly and daily performance monitoring. These practices are perfectly “rational” in a means-end sense and manage all kinds of agency conflicts but at the same time produce all kinds of systemic problems. The end result is very different to that in standard economic theory.

The other main point is whether the underlying psychology I am introducing, psychoanalysis (emotional finance), is or not, more or less useful than other forms.

At this point I see no conflict. While there is plenty of scope to elaborate on or differ from the theories I am setting out, I contend that they are plausible efforts to make sense of accepted observations about asset price bubbles and the behaviour of financial market participants, which have hitherto been largely without explanation – in essence treated as error. We are at a very early stage in evaluating the ideas. One set of supports (buffers) is that financial participants do feel what is described fits their experience. But a more crucial test is to ask whether there are there other ways of interpreting this data which lead to theories which significantly contradict what I am suggesting. In common with the usual approach in the social sciences I think setting out such theories in such a way we can chose between them is the way forward. The question then becomes not whether the story can be told differently but whether an alternative story seems to make more sense of the facts that the offered story seeks to illuminate. A second question is whether any new theory contravenes known “facts” of human behaviour, as for example those established in a laboratory or other formal method.

If I understand reviewer 2 s/he believes there are other psychology stories, "buffeted by empirical studies and laboratory experiments" which are better suited to show economists how to think about the functioning and regulating of markets.

The main point here is what is it economists are trying to understand about the functioning and regulating of markets with any psychological theories. Until now in standard theory major economic bubbles do not really happen ("rational bubbles") or, if they do, they are treated as reflecting some rare unpredictable & unavoidable outcome of capitalism – "the price we pay" for all the other benefits of free markets[1]. Although there has been and will continue to be interesting and insightful work in behavioural finance on other topics connected to financial markets, to date I know of no such theories able to tell a different contradictory story to that I have offered about the "facts" of bubbles or fund manager experience mentioned above. Indeed most recent cognitive psychology and behavioural finance is complimentary as is current neurobiological work and work from evolutionary psychology.

Emotional finance theories attempt to address something that until now has been ignored – the impact of the context in which economic actors find themselves, which includes their subjective experience. I believe this is likely to worry economists as it has worried many other academics - the anxiety being that if things are subjective then there is no way to study them scientifically so that no general explanations will be possible and we will sink to throwing speculations at each other. These are large and proper concerns but not ones I can deal with here nor ones I think we can use to allow complacency or to define what we can and can't study. Do we really want to argue subjectivity is irrelevant – and by assertion? Economics has enjoyed considerable success by basing itself on methodological individualism while at the same time making assumptions that largely remove from actors any choice. But this is also a stumbling block. Fortunately, this is just the territory sociologists have had to inhabit and to think about for some time now - in point of fact in some cases inspired by the long forgotten efforts of Pareto and Marshall as well as Simon (see Parsons, 1937; Goldthorpe, 2007). Suffice it to say that within the methodological framework of a sociological "Rational Action Model" it is possible both to model social and economic systems and to seek explanations based on the social actor's subjective viewpoint. The key is to recognise and specify the differential effect of different contexts – within which we can include neurobiological, psychological and social institutional factors.

In a more academic paper I would stress the intellectual debt in this paper to the sociologist and psychoanalyst Neil Smelser, whose 1963 theory of collective action informs the ideas about "covering stories" (and long antedated Shiller's "new era" stories). Smelser (1998) also foresaw the potential for economic sociology to focus on emotional experience and the value of the psychoanalytic concept of ambivalence as a possibly useful adjunct to rational action. He argued choices can only be rational in those limited instances where the choice context is stable. But in general, both

[1] Minsky and others, of course have taken a different view. There is a forthcoming paper by Shelia Dow (University of Sterling) with a discussion of the utility of different psychological frameworks (including an emotional finance perspective) within a Keynes-Minsky framework. She draws attention to the limitations of behavioural finance and relates the interest in emotional finance in emotion to Adam Smith's interests in sentiments as well as to Simon.

rationality and choice recede not because of human limitations but before empirical reality.

Reviewer 2 began by summarising my argument suggesting I consider that "financial markets are inherently unstable since human beings are boundedly rational and thus not able to cope with the complexity of these systems". This way of summarising reveals some of the differences and difficulties reaching understanding between disciplines. For me there is an (unintended?) hint in this statement of a mismatch between human beings and their environment, as though only a rational individual could cope properly. But on the contrary, like Gigerenzer and Selten, I see the capacity for calculative reasoning as only one part of a human beings very highly developed capacities and one that on its own would be disastrous. In regard to risk-taking Simon states that "since consequences lie in the future, imagination must supply the lack of experienced feeling in attaching values to them" (1947:93). It is here the psychoanalytic notion of phantasy can be linked to emotional experience & situated within different states of mind; as a framework with which to capture part of the subjective situation in which economic actors find themselves. Simon, like Keynes, focused not only on the cognitive limitations, and consequent bounded rationality with which his work is often associated, but also on the open nature of social systems, which precludes the possibility or even desirability of certain knowledge (Simon, 1955, 1986). Unlike much current mainstream economic theory, he enquired into mental processes, rather than just outcomes. He also developed a theory of decision-making based on heuristics rather than conventional rationality.

It may help to know this paper was written for a more general audience – financial market participants, academics, policy makers, government officials, regulators, journalists – and edited accordingly. If the above explanations seem of some use then I could attempt to incorporate into a revised version, perhaps mainly in order to set the scene at the beginning of the paper. The last part of the paper, which the original commissioners were very keen to have, could be substantially shortened.

To Anon Comment 3.

Certainly. This will be doen.

To Annon Comment 4

I will try to meet these points in a revision