Riding the financial market *"emotional rollercoaster"*: exploring the connection between the decision context, specific emotions and the risk behaviours of financial traders.

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Introduction:

In financial trading the relationship between emotion and risk-related decisions receive a lot of attention. Trading discourse abounds with the importance of 'controlling' or 'managing' emotions if you are to become a successful trader (Grigoriou, 2015; Stanley, 2012). As Jack D. Schwager notes; "The key to trading success is emotional discipline. Making money has nothing to do with intelligence" (Schwager, 2012). Yet, understanding of the nature of the relationship between emotion and risk behaviour remains unclear (Cheung & Mikels, 2011; Drace & Ric, 2012). Are risk-related decisions influenced by emotional responses to situations, such as anxiety and dread, signalling the presence of risk? (Loewenstein, Weber, Hsee, & Welch, 2001; Slovic, 1987, 2010; Slovic, Finucane, Peters, & MacGregor, 2004). Or does the incidental experience of being in either a positive or negative affective state influence future risk-related decisions? (Alhakami & Slovic, 1994; Cheung & Mikels, 2011; Isen, Nygren, & Ashby, 1988). Increasingly, scholars criticise the dominant focus of the literature on the valence of emotion (i.e. contrasting negative and positive affective states) for the narrow view it takes on how emotions impact behaviour (Lerner & Keltner, 2000; Lerner, Li, Valdesolo, & Kassam, 2015). Such approaches do not specify "if and when distinct emotions of the same valence have different effects on judgements" (Lerner & Keltner, 2000, p. 476). This is particularly pertinent in the context of financial trading, where traders demonstrate different behaviours in response to emotions of the same valence (i.e. fear, anger, greed) (Fenton-O'Creevy, Soane, Nicholson, & Willman, 2011; Lo, Repin, & Steenbarger, 2005).

This paper responds to this issue by exploring the impact of specific emotions on traders' risk behaviour. It presents a qualitative study of FX traders, uncovering the situational factors which trigger emotions and why specific emotions influence risk behaviours. Through the novel adaptation of a narrative interviewing method, the particular contextual factors which characterise distinct emotions are explored. The appraisal tendency framework is applied to conceptualise why specific emotions (i.e. fear, anger, contentment and happiness) — triggered by how situations have been appraised along the dimensions of certainty, control and responsibility — influence risk behaviours.

Theory:

The appraisal tendency framework (ATF) provides an emotion-specific theoretical framework for examining the influence of affect on decision-making. The framework draws from the cognitive appraisal dimensions developed by Smith & Ellsworth (1985)[1]. It proposes that specific patterns of appraisal dimensions (i.e. contextual evaluation) characterise specific emotions and in turn influence how individual's view future events. For example, fear can be distinguished from anger according to the appraisal dimensions of certainty and control (Han, Lerner, & Keltner, 2007; Lerner & Keltner, 2000). Fear is defined by uncertainty and situational control, while anger is characterised by certainty and human control / responsibility (Drace & Ric, 2012; Lerner & Keltner, 2001; Lerner & Tiedens, 2006). These appraisals then spill over to influence future decisions (Han et al., 2007). Anger is triggered by the perception that someone else was to blame for the event (human responsibility), but leads the individual to "consider their environment as predictable and under control" (Drace & Ric, 2012, p. 410). While fear is triggered by a perception of the event as being unexpected and under the control of the environment thus leading them to assess future events as being unpredictable and out of control (Drace & Ric, 2012). Such appraisal dimensions are found to impact risk-related decisions. The certain, human control / responsibility appraisals, which characterise anger, lead to risk-seeking behaviours (Beisswingert, Zhang, Goetz, Fang, & Fischbacher, 2015; Lerner & Keltner, 2001). Conversely, the uncertainty and situational control appraisals, which characterise fear, lead to risk-averse behaviour (Kugler, Connolly, & Ordóñez, 2012; Lerner & Keltner, 2001).

Fear and anger have been the sole focus of empirical ATF studies on risk behaviours (Beisswingert et al., 2015; Han et al., 2007; Lerner & Keltner, 2001), because they differ significantly in certainty and control which are particularly relevant to the study of risk

[1] Smith & Ellsworth (1985) proposed six different dimensions which reflect how people judge situations. These include: pleasantness, anticipated effort, certainty, attentional activity, human responsibility / control, situational control.

(Beisswingert et al., 2015). However, in the context of financial trading, positive emotions have also been found to influence risk-related decisions, with traders in a good mood taking more risks than those in a bad mood (Au, Chan, Wang, & Vertinsky, 2003). However, such findings did not identify the specific positive emotion which led to risk-taking behaviour. Thus, it is important to further theorise the specific positive emotions characterised by the appraisal dimensions relevant to risk: certainty and control.

In this regard, happiness and contentment are characterised by elevated certainty and human control / responsibility (Drace & Ric, 2012). However, both differ in their intensity leading to different impacts on subsequent behaviour (Tong, 2015). As an emotion of high intensity, happiness is activating. It motivates individuals to seek future events which enable them to experience similar level of happiness (Roseman, 1996; Tong, 2015). Furthermore, it shares the same appraisal characteristics as anger, thus happiness is considered to trigger risk-taking behaviour (Drace & Ric, 2012). Conversely, although contentment shares similar appraisal dimensions, it is less intense than happiness or anger and therefore is not an activating emotion. Rather, "theories of the function of contentment suggest that this positive emotion prompts individuals to reduce behavioural activation, seek familiar places and savour and integrate their recent successes" (Griskevicius, Shiota, & Nowlis, 2010, p. 241). Thus contentment should motivate decisions which maintain the individual in a positive and familiar state and enhance and ensure safety, implying a preference for risk-averse behaviour (Fredrickson, 1998).

In light of this conceptualisation of the influence of contextual evaluation in triggering specific emotions and subsequent risk-related decisions, this study seeks to explore the following questions:

1. What situational factors underlie the experience of fear, anger, happiness and contentment?
2. How do specific emotions influence subsequent risk-related decisions?
3. What are the risk behaviour outcomes associated with each emotion?

Method:

This study used a sample of 11 FX traders with between 10 and 25 years' experience. All were male and worked in different organisations. Interviews were made in person with nine of the participants, and two completed over skype due to location constraints. The average interview time was 50 minutes. Each interview was recorded and later transcribed in full, with participants' permission, and returned to them for validation.

Designing a suitable method to explore risk behaviours through the lived experiences of participants is inherently difficult due to the subjective nature of risk. It is difficult to ascertain whether responses are what individuals 'talk' about risk or what they 'think' about risk (Lincoln & Guba, 2003). Hence, a narrative interviewing method was used to enhance the credibility of responses. Narrative research allows the question of risk to be 'de-centred' (Henwood, Pidgeon, Parkhill, & Simmons, 2010; Smith, Cebulla, Cox, & Davies, 2006). Rather than asking direct questions, it encourages individuals to recount and tell stories about their experiences (Squire, 2008a). When individuals tell stories, they reconstruct the context, the time, their motivations and recount the factors which they place significant meaning on (Jovchelovitch & Bauer, 2000; Squire, 2008b). Interviews were designed to prompt discussion around three broad themes: (1) the experience of being a trader, (2) the performance driven nature of trading, (3) traders' experience of targets. This broad approach is central to narrative interviewing, where participants are encouraged to describe and discuss experiences by an initial prompting question, but their response is constructed from their own personal perceptions and what they deem explicit and meaningful within the experience they choose to discuss. Thus the findings presented are the outcome of traders' discussion of risk and emotion emerging naturally within their narratives as points of importance, without any questions which directly prompted them to discuss risk or emotion.

Findings:

The emotions traders experience are strongly influenced by their evaluation of their profit and loss levels, i.e. whether they perceive they are making or losing money. As one trader describes, *"it is hard not to get emotionally involved in the daily performance as well. You get big daily swings, I think it is all about the performance and that number on the screen, with the profit and loss"*. Often, the perception of losing money triggers "*fear"* and "*anger"*.

Fear is characterised by uncertainty as to what they outcome will be, resulting in a deactivating effect — "*I'm talking like, you see people who can't actually go like (made motion as if freezing over clicking a mouse), they shake, they can't buy or sell, the step is too far, because they are scared of losing money".* This deactivating effect leads to risk-averse or risk-reducing behaviour as *"if I'm in a bad run of things I lose confidence and I don't think* *that the trade is going to be the right one, I don't make as many trades for example. I'm less active, you go back in to your shell almost. Protective mode"*

Anger is characterised by attributing the situation to that of another (i.e. other – responsibility appraisal) triggering risk-taking behaviour as the individual seeks to exert control over the situation;

> "Y*ou get married to a position, so I've had days where…. some guy.... let's just say I'm up 200 grand, then this guy has come in, and let's say he's dealt a tiny trade, like a 5-unit trade, and I can cover like a 5,000-dollar loss and I'm still going to be…. let's say my daily target was probably 150,000, so this is great, I'm fine. Whatever ok, well it's a multiple of my budget. And then I've got angry, and I've doubled up, trebled up, quadrupled up, and then I've ended up 200 grand down. And that has happened on a regular basis"*.

Indeed, when losing money is experienced through anger, the resultant behaviour can be to increase bet size, in other words, take more risk.

> "*Last Monday I lost 330,000 dollars, in like 2 minutes....and immediately you're angry! Immediately your thought process is in the negative spiral of thought process, now I've been there before…. if you take that negative thought process, and that spirals, that 300 will be 500 within 2 hours. And at that point, you are now breaching your sort of daily trading limits, and there are a lot of people asking a lot of questions. And rightly so*".

Interestingly and contrary to the ATF, anger may not always be evoked by appraisals of other-responsibility, but by appraisals of self-responsibility;

> *"It depends how it happened, depends if its self-inflicted, as in me over trading, or whether it's a client driven loss…. if it's from a client and we're acting as a principal and we're providing prices and liquidity to our clients, if it was that one, I'm a little bit more relaxed about the loss, emm, because some of that can be out of your control. If it was me in that spiral I was talking about of the over trading. That makes me really, I'm really disappointed with that, really disappointed with that. Even today, even doing it this long, I get really, frustrated from that"*

The impact of loss on traders' risk behaviour thus appears to be strongly influenced by the particular emotion that situation triggers. Feelings of fear, often encompassed by a loss in confidence result in risk-averse behaviours, while anger triggers risk-taking.

When traders perceive their immediate context is in profit and they are making money, they experience positive emotions, such as feeling *"happy"* or *"euphoric"*. When experiencing happiness, traders attribute themselves to be responsible for their success which increases their confidence and certainty that future decisions will be correct;

> *"When things are going well it affects your, actually the results affect your mood, I find, when things are going well, you are happy and I feel confident in making decisions that they are going to be the right ones"*.

Furthermore, consistent with the influence of happiness on risk behaviours, traders describe how the impact of happiness on their self – confidence drives risk-taking;

> *"I think in nearly all circumstances, the confidence of doing well will drive your risk taking up and you will take bigger positions and you feel you know, it just builds"*

Interestingly, contentment is described in the context of having met performance targets, rather than the experience of being up money and winning trades which trigger happiness and euphoria. This may be due to the intensity of each emotion; meeting targets in the trading environment is a necessity so does not induce the same intensity as winning trades and having a positive P&L. Consistent with contentment being a deactivating emotion, it encourages individuals to protect what they have achieved, and make decisions based on security. This reflects why traders describe how, in many cases, once someone has met their target towards the end of the year they tend to *"just close down and take the rest of the year off"*. This can also be the case on a day to day basis when traders set themselves daily performance targets, such as if *"they've made 100 grand, they sit back, close up shop and go and get a coffee and walk around"*. Such behaviour, consistent with the effects of contentment on decisions, is because they do not want to risk losing the favourable situation they have reached. Rather, they seek to protect the achievement of their performance targets by trading less and therefore risking less. So they *"close up, you know at the end of November, because they don't want to risk losing any money"*. Once they have "*done what they need to",* in terms of meeting their budget they "*wind back their risk, you know, sit on it and just sort of tend, you know make sure they don't screw it up"*.

The specific positive emotion experienced is an outcome of the traders' evaluation of the nature of the decision context. Winning trades and increasing P&L lead to happiness and euphoria, which can in turn lead to greater risk-taking as traders' feel a sense of certainty in future positive outcomes. Conversely, just meeting their performance targets results in a sense of contentment of satisfaction, that they have done enough so therefore can reduce their risk-related activity in order to protect and safeguard their performance position. The influence of each emotion in relation to the research questions is presented in the following table 1.1.

	1. What situational factors underlie each emotion?	**2. How do specific emotions influence subsequent risk-related decisions?**	**3. What are the risk behaviour outcomes associated with each emotion?**
Fear	Loss context. Uncertainty, lack of control over outcomes	Deactivating effect. Struggle to make decisions and seek to reduce risk	Risk-aversion
Anger	Loss context. Certainty, other and self-responsibility	Activating effect. Seek to exert control over situation by reactively increasing bet size / trading activity	Risk-taking
Happiness	Gain context – winning trades, increasing P&L Certainty, self-responsibility	Activating effect. Feel a sense of certainty in decisions and future outcomes so can take bigger positions.	Risk-taking
Contentment	Gain context – met performance targets Certainty, self-responsibility	Deactivating effect. Seek to protect performance achievements and reduce losses / risks.	Risk-aversion

Contributions:

This study contributes to developing an understanding of how distinct emotions, despite being of the same positive or negative valence, have different influences on risk-related decisions. This enhances understanding of how and when specific emotions influence risk behaviours. Given the focus on the influence of emotions on decisions in financial trading and investment domains, this study contributes to providing a deeper account of what situational factors trigger emotions, and how they influence subsequent risk behaviours. Furthermore, this study contributes to the theoretical development of the ATF, by extending it to explore the impact of specific positive emotions on risk behaviours in a field-setting.

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