1.1 Current approaches to trust in investment decisions

Behavioral finance has had tremendous impact on finance theory and enabled a significantly better understanding of why actual investor behavior deviates from rational choice predictions based on normative axioms. A thorough appraisal would go beyond the scope of this paper; a short overview of the origin of behavioral finance and, especially, the development of prospect theory is given in section 2.2. Amongst its most prominent insights, it showed that human decision making does not follow strict stochastic rules of probability, utilities cannot be equated to absolute monetary values, decisions do not follow linear preference, and context does matter. Most of the approaches in this discipline, however, still share some of the underlying principles found in classic finance theory[8]. Concepts that acknowledge the role of emotions and motives beyond utility maximization are scarce and *trust* (in a broad understanding of the concept) is commonly not integrated into scientific approaches to investor behavior – although very present in media and in laypeople's and professional's perception of stock market behavior, especially in times like the current global financial crisis (Krugman, 2009). Some behavioral finance researchers do employ select approaches of confidence or sentiment, but only in a very narrow understanding and mostly on a global level (see section 2.4.1). An integrative model of trust in *individual firms*, also incorporating a broad understanding of overall market trust, does not exist to my knowledge – cross-sectional differences amongst firms with respect to trust are commonly analyzed only ex post.

Mainstream economic research has an even narrower understanding of decision making and seems to neglect the role of trust in finance theory altogether (see also section 2.1.2). A research in major economic journals revealed only 14 papers which explicitly combine the topic of 'trust' or 'confidence' in the context of investment behavior[9]. And only one of these papers, unsurprisingly following the discipline of behavioral finance, actually analyzes the impact of confidence on stock prices: by drawing parallels between overall consumer confidence and investor sentiment, Lemmon & Portniaguina (2006) explore how the performance of small stocks and stocks with low institutional ownership is affected by these measures of global confidence. Two further studies are at least loosely related to the concept of trust in economic settings. Carlin, Dorobantu, &

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[8] E.g., the concept of a multiplicative combination of (perceived) probabilities and outcome values, the idea of maximization as decision rationale, etc.

[9] Research on economic journals classified as A+ by the VHB Journal Quality List (Hennig-Thurau, Walsh, & Schrader, 2004; Schrader & Hennig-Thurau, 2008b, 2008a) with "trust" or "confidence" in the paper title and "investment" or "investor" in the subject terms on Nov. 9th, 2009.

Viswanathan (2009) analyze the interaction between public trust (narrowly understood as a purely rational evaluation) and regulation for economic growth. Wicks, Berman, & Jones (1999) discuss optimal levels of trust in the context of management behavior in organizations – one of the few research areas in which interdisciplinary thinking and acknowledgement for the role of trust has advanced very far in recent years (see also section 1.2.5).

Though it did not appear in the scan of major journals, another area of economics also conducts research on select aspects which may be linked to trust: marketing. By analyzing aspects of brand awareness, image, customer loyalty, etc., this domain yields a few interesting insights for a broader understanding of trust, yet less exhaustively and less integrative than organizational research. Many authors have confirmed the impact of the above aspects on consumer behavior (Allison & Uhl, 1964; Cooil, Keiningham, Aksoy, & Hsu, 2007; Hoyer & Brown, 1990) and also on investor behavior (Aaker & Jacobson, 1994; Aksoy, Cooil, Groening, Keiningham, & Yalçın, 2008; Barth, Clement, Foster, & Kasznik, 1998; Fornell, Mithas, Morgeson, III, & Krishnan, 2006; Gruca & Rego, 2005; Ittner & Larcker, 1998; Madden, Fehle, & Fournier, 2006; Mizik & Jacobson, 2004; Srinivasan, Pauwels, Silva-Risso, & Hanssens, 2009; for overviews see Gupta & Zeithaml, 2006; Srinivasan & Hanssens, 2009).

Some research also focuses on the topic of reputation, arguably a very important driver of trust. Commonly, authors in this domain either focus on analyzing the relationship between reputation scores in expert surveys and firm performance (Jones, Jones, & Little, 2000; Roberts & Dowling, 2002; see for a review Dowling, 2006) or try to develop rational choice models explaining the dynamics of reputation (for a review see Bar-Isaac & Tadelis, 2008). In that manner, reputation research on the one hand is different from the proposed concept of trust, as it still assumes full rationality and direct calculability with strict rational models of expected utility (see later sections for criticism on this approach). On the other hand, such an understanding on reputation is narrower than the concept of trust, as the focus of reputation surveys mainly lies on one (cognitive) dimension of the inter-subjective component, ignoring others (e.g., heuristics) and neglecting the role of a-rational emotions.

In summary, it seems that the psycho-logic introduced in the beginning of this paper and especially the role of trust in a broad understanding is not commonly employed for economic settings – with the exception of organizational research. Especially in the area of investment decisions, common rational choice or expected utility models of the average 'homo oeconomicus' still form the basis for main stream theory on asset prices and port-

folio selection (compare Fama & French, 1993; Markowitz, [1959] 1992; Sharpe, 1964), which leave no room beyond rationality except for 'noise' or statistical error. The few behavioral finance approaches that do employ selective concepts of (overall) investor confidence are commonly viewed as competing against classic economic logic. The approaches focusing on brand equity or reputation contribute to a better understanding of certain trust aspects, but still deliver no exhaustive or integrative perspective on the psycho-logic in investment decision making.

The aim of this paper is not to rate one logic over the other, but to perhaps relieve the psycho-logic, apparent in many day-to-day decisions, from its nimbus of inferiority. Both logics have their sensible and empirically proven domain of applicability and should be seen as *complementing* rather than competing against each other. Over the course of this paper, I will present arguments that a broad understanding of trust may encompass the vast majority of psychological aspects in decision making such as cognitions, emotions, motives, beliefs, heuristics, etc., and may serve as an integrative approach to reconcile these two logics.

The main reasons for proposing trust as new integrative approach to investment decision research in addition to strict economic rational choice can be summarized as follows:

- Previous approaches focus only on select aspects of trust – explaining only parts of the inter-subjective component and failing to deliver a mutually exclusive and collectively exhaustive perspective (see section 2.4).
- Trust is paramount to human interaction and decision making (see especially section 1.2.3).
- Trust is intuitively acknowledged by most investors (ask any stock broker).
- Loss of trust or confidence seems to be at the root of each stock market crisis (see media coverage on the current financial crisis and Akerlof & Shiller, 2009; Krugman, 2009).
- Trust has been very successfully employed in other economic contexts, especially organizational research (see section 1.2.5).

1.2 Research on trust in psychology, sociology, and philosophy

The topic of trust received research attention in social sciences comparably late; and only in more recent years has the focus shifted from strict rational choice perspectives still dominant in economic theory towards a broader understanding of trust, which also incorporates affective aspects and cognitive aspects beyond strict rational choice.

The previous section has shown that economic research on investment decision yields only few references to trust. On the other hand, trust research in psychology, sociology, and philosophy dedicated only little research attention to investment decision making. A query in common psychological, sociological, and philosophical databases lists only 33 entries which explicitly employ the term ‘trust’ in the investment context[10]. Only two papers, by the same author, directly refer to the role of trust in stock market investment decisions. Olsen (2004; 2008) draws upon interdisciplinary research to postulate a cognitive and affective component of trust which can accommodate alternative explanations for some of the anomalies found in behavioral finance. He sees trust as one of the main drivers behind the 1990’s market bubble and, additionally, hints at the supporting role of how information was spread by few ‘trusted’ opinion leaders in the investing community amongst ‘small world networks’. In lack of a clear definition or an empirical approach, however, he conceptualizes trust rather narrowly as a subordinate to the concept of risk in classic finance models. His methodological recommendations are limited to hinting at that a ‘feeling of knowing’ should guide possible measurements of trust in future research and looking at marketing measures of consumer perception.

Berg, Dickhaut, & McCabe (1995) stimulated a lot of research in the area of game theory (see also section 1.2.2.1) with their development of an investment game. They found forms of trust and reciprocity appearing in their game paradigm which go beyond what can be explained by strictly rational economic assumptions of self-interest maximization and external motivators of reputation or contractual commitment. Rieskamp (2003) confirms their findings and identifies a motivation of fairness as influencing factor. Willinger, Keser, Lohmann, & Usunier (2003) analyze the impact of trust as a social capital and find cross-national differences between German subjects (with a higher level of trusting behavior) and French subjects and hint at the potential impact on the efficiency of each society and its institutions. Güth, Levati, & Ploner (2008) employ the investment game to analyze the impact of social identity theory (Tajfel, 1970; Tajfel, Billig, Bundy, & Flament,

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[10] Research on PsycBOOKS, PsycINFO, and SocINDEX with Full Text databases (via EBSCO Host) and research on databases PSYNDEXplus Literature and Audiovisual Media, PSYNDEXplus Tests, and PHIL (via OVID SP) with “trust” in the paper title and “investment” or “investor” in the subject terms on Nov 9th , 2009.

1971; see also Brewer, 1981a) and find – contrary to expectation – no discrimination between groups but rather a generalized trust to be present. Kurzban, Rigdon, & Wilson (2008) find that participants seem to prefer to build trust gradually in iterated games, rather than risking all the stakes at once. A further study ponders paradox experimental findings of participants underestimating the level of trust that would be reciprocated by their game partners ('trusted too little'), but yet exhibiting 'too much' trusting behavior if compared to their low expectation of reciprocity (Fetchenhauer & Dunning, 2009).
Of the remaining 25 papers only two more are loosely related to the topic of this paper. Perelman (1998) criticizes how economic research has lost sight of the concept of trust, though without giving any concrete suggestions on how to meliorate this situation. He discusses examples of how an erosion of trust would impact society on a macro-economic level with a reference to investments. Belting (2008) analyzes the impact of trustworthiness of an investment advisor for investment decisions.

The same database research finds only 16 entries combining 'confidence' with investments[11]; six of which are partly related to the role of trust in investment decision making. Estes & Hosseini (1988) analyze the characteristics of subjects in a large-scale experiment, where confidence in an investment decision (here: referring to the perceived accuracy) was manipulated. They found women to have significantly lower confidence levels than men, though familiarity with and attitude toward investing in the stock market had a moderating effect. Also Laroche & Sadokierski (1994) understand the concept of confidence solely as confidence in one's own judgment and analyze its role for the intention building of an investment decision, based on the attitudes towards brands of investment firms. Shiller (2000) describes methodology and results of his survey of investor confidence, referring to a broader understanding of investors' expectation regarding short and mid-term stock market development. Sturm (2003) finds that investor reaction to large one-day price shocks and firm fundamentals can (also) proxy for a comparable understanding of investor confidence.
Less related to the focus of this paper, Anderson & Snow (2003) examine Swedish policy making in form of a crisis program and how it positively impacted overall business confidence during the Great Depression, contrary to everybody's expectation. Payne, Davis, Moore, & Bell (2009) look into the role of confidence and potential control of venture

[11] Research on PsycBOOKS, PsycINFO, and SocINDEX with Full Text databases (via EBSCO Host) and research on databases PSYNDEXplus Literature and Audiovisual Media, PSYNDEXplus Tests, and PHIL (via OVID SP) with "confidence" in the paper title and "investment" or "investor" in the subject terms on Nov 9th , 2009.

investors and entrepreneurs during different stages of venture capital deals. They distinguish confidence from trust as factors in the deal structuring stage slightly different than most other authors, and presume that the former is primarily relevant in the pre-investment relationship and the latter in post-investment relationship.

In summary, it seems that not only economists, but also further social science researchers, still assume investment decisions to be taken from rational choice perspective. A scan on SSRN for more recent developments did not add any significant contributions to the previously discussed papers. A very small trend towards a slightly broader understanding of trust may be discernible, yet mostly limited to global confidence (see, e.g., Bottazzi, Da Rin, & Hellmann, 2009; Kim & Purnanandam, 2009; Osili & Paulson, 2009; and most notably Dailami & Masson, 2009, who propose four dimensions to measure global investor confidence: market volatility & performance, macroeconomic news, and government responses). On the firm-specific level of trust, only three related papers were found: Elliott, Hodge, & Sedor (2009) evaluate impact of financial restatements in video form; Holt & DeZoort (2009) review firm-specific trust very narrowly as 'financial reporting reliability'; Houser, Schunk, & Winter (2009) contribute a further study inspired by Berg et al.'s investment game.
The concept of trust is not commonly applied to stock market investments, with only few exceptions that refer to a narrow perception of the overall market situation. The potential of employing trust as a broader integrative concept to account for investment behavior beyond rational choice and for differences between individual firms is yet to be explored.

Thus, the following sections aim at tapping into this potential by developing a broader and more thorough understanding of trust. This is done by giving a short overview of broader approaches to the concept of trust by researchers in the field of psychology, sociology, and philosophy beyond the investment context. As trust research is a very extensive field in each of these disciplines alone, an exhaustive view just for one area would already go beyond the scope of this paper. Thus, in combining these three, a strict limitation was necessary to those select approaches which are deemed relevant to considerations for investment decision making and which influenced me in my thinking.