

Methodological Dominance in Academic Finance: The Case of Behavioural Finance

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Abstract

Academic finance is claimed to be a discipline dominated by positivist research approaches. This is maligned by some researchers owing to the preservation of a rather narrow research agenda, which limits the possible development of finance as a discipline. By drawing upon the development of behavioural finance as an illustration, the article outlines how particular research areas and topics can be captured through positivist approaches, and speculates on methodological, and epistemological, implications of such capture. The article concludes with a call for methodological pluralism in finance.

Key Words: Academic finance; methodology; positivism; behavioural finance

Introduction

Economics, as a discipline, is perceived by many to have a significant degree of influence over the development of related disciplines in business; for instance, it is claimed to be foundational in the development of many accounting practices (Williams, 2003). Similarly, economics has also exerted some notable stimulus to the development of academic finance, with key models and theories leading to the growth of modern finance - a related set of theoretical and practical advancements in the 1970s including, but not limited to, the inception of the capital asset pricing model (CAPM), efficient markets hypothesis (EMH), and a number of options pricing formulae. And whilst these developments, individually, took place at different times, they are unified in their conceptual bases (Horrigan, 1987; Frankfurter, 2007a; Caldentey and Vernengo, 2010) and through their deployment of methodologies drawing from statistical methods in economics (Frankfurter, 2007a). These methodological developments have imparted a degree of financial economics in the practice and research of contemporary finance.

The theories and practices that comprise modern finance have since come to dominate the landscape of academic finance research (Frankfurter, 2007a) and alongside this, the methodological tools of modern finance have also become dominant (Frankfurter, 2007a; Ardalan, 2008). This has also brought with it concerns that positivism, as a methodological approach, is also dominant. In a comprehensive review of finance research, Ardalan (2008) noted that the vast majority of published academic research is limited to a functionalist approach - one that views finance as a technical practice and one that presumes a practical use for any knowledge that is created in academic research. This functionalist view of research has also been paired with a significant stress upon the use of positivist research method (Frankfurter, 2007a; Ardalan, 2008) whereby finance research has become imbued with the search for explanatory and predictive power (cf Bloomfield, 2010), and growth in the forms of research adopting statistical analyses from econometrics (Frankfurter, 2007a) subsequently limiting finance to an ostensibly "objective" description of human activity (cf Ardalan, 2008). To be sure, the positivist approach is evidently dominant to the extent that the most prestigious journals in the field rarely publish articles that are not consistent with a positivist approach (Frankfurter, 2000; 2007a).

Against this rise of positivist research approaches, the calls for engagement in alternative paradigms (Ardalan, 2000; 2001; 2008), and even for alternative research methods, such as those within a qualitative research perspective (Bettner et al., 1994), are largely ignored. In short: positivism dominates contemporary academic finance. This becomes an issue as positivism shields specific aspects of finance against critique, and research progresses along the narrow imperatives of positivism (cf Williams, 2003). In the next section, the case of behavioural finance is recounted to illustrate how positivist approaches are used to deny the critique(s) of behavioural finance. This fulfils the wider purpose of the paper, which is to highlight the challenges of critique in finance.

The Efficient Markets Hypothesis

One of the key research streams of the modern finance movement was devoted to studying the market (see, Horrigan, 1987; Frankfurter, 2007a), and it is here that Fama (1965; 1970) has made a significant contribution through the analysis of market efficiency, particularly his role in developing the efficient markets hypothesis (EMH) which affirms the informational efficiency of financial markets. The EMH has three main forms, which are explained here briefly for illustrative purposes. Firstly there is the weak-form which states that prices fully reflect all previously available information which is contained in historical prices and price movements. On this basis, price history cannot serve as the base for trading strategy as future prices cannot be determined, or predicted, using this historical information, and so investors cannot gain above market rates.

Secondly the strong-form addresses how insider trading can impact upon prices, as prices reflect all relevant information, including privately held information. If insider traders, such as employees or directors of a particular firm, have specific information relating to a future transaction and begin to trade, the price will move to reflect this increase in trade and insider traders will be unable to consistently earn returns in excess of market rates.

Finally, the semi-strong form, which operates between the weak and strong forms of EMH, asserts that all relevant and publicly available information is reflected in prices. The inclusion of relevance here extends the informational assumption of the weak-form to include information related to not only historical price trends, but towards the inclusion of firm-related events such as earnings announcements, dividend issues, profit forecasts, technological advancements deployed by the firm, and even Board-related events such as director hiring or resignation. However, any private or inside information is not considered by the semi-strong form. Even with increased public information, the semi-strong form affirms that investors are unlikely to gain above market rates as investors will receive the public information at the same time as the market does, and so no trading advantage can be gained as prices will already have adjusted to reflect any announcements by the time an investor is willing to trade.

Owing to the three forms of efficient hypotheses, Fama (1970) has stated that due to the public availability of market information, investors are unable to achieve consistently above average returns on the market on a consistent basis because prices reflect the levels of information available. The subsequent impact of EMH on finance has been to reconstruct perceptions of the market, forming a foundational belief in modern finance (see Frankfurter, 2007a). Also core to EMH and modern finance is the theory of rationality, wherein financial agents and market participants are theorised to act and make decisions in accordance with their own beliefs and expected utility (Barberis and Thaler, 2003).

Behavioural Finance

Behavioural finance, as a research topic within finance, aims to provide an understanding of the behaviour of market participants, arguing that market participants and financial agents do not act with complete rationality. Rather, a number of factors such as trading opportunities or psychological issues can impact upon the behaviour of investors such that they do not act rationally; resultantly choices and decisions, for example, can be incompatible with expected utility (Barberis and Thaler, 2003).

For example, Saunders (1993) hypothesised that bad weather can produce negative feelings and moods of traders and that this has an impact on trade conceived as lower stock prices; conversely good weather can have positive effects resulting in higher stock prices. The study analysed weather patterns in New York for the period 1927 to 1989, finding that weather had a statistically significant influence, and an economic impact, upon asset prices: defining bad weather through higher levels of cloud cover and good weather as clear days, he finds that there is a significant relationship between stock prices and the level of cloud cover in New York. This suggests that there is a psychological bias that affects trade and/or stock returns. In addition, Lucey (2000) examined Friday close returns on the FTSE world indices from January 1988 to May 2000 for 19 countries, findings that there were significant statistical differences on dates occurring on Friday the 13th of the month, than on any other Friday; in 9 of the 19 countries observed, returns were significantly higher, suggesting the presence of a Friday the 13th effect in stock pricing that is based upon psychological aspects of investor's trading patterns and behaviour.

Whilst the broad area of inquiry is contributing to an understanding of financial agent behaviour as well as postulating that "some financial phenomena can be better understood using models in which some agents are not fully rational" (Barberis and Thaler, 2003: 1053) the area has, however, been viewed as offering a contradiction to the core theorems of EMH and modern finance (Fama, 1998; Frankfurter and McGoun, 1999; Frankfurter, 2006; 2007a; 2007b) rather than progressing as an area of independent inquiry.

Fama's Rebuttal

Broadly responding to behavioural finance critiques of EMH, Fama (1998) reviewed over twenty studies of behavioural finance, finding that their apparent challenge against the market efficiency hypothesis was, in most cases, "embarrassing" (285) owing to the predominant focus of the studies on anomalies to the EMH: overreaction and underreaction to market events, which leads to either over-, or under-, valuation of stocks and assets and suggests that the market is not as efficient as theorised in EMH (cf Ball, 1996). Fama criticises these studies as they are not pure event studies¹, and hence do not engage fully in the precepts of modern finance methodology. It is noteworthy that only two of the reviewed studies receive some small measure of praise, and this is because the studies have models that "present rejectable hypotheses" (285), and thus embody some ideal aspect of modern finance method.

Fama's exercise follows an earlier dismissal of behavioural finance by Ball (1996) who attacks it on the basis that, as an area of study, it is theoretically and methodologically inconsistent. In so doing, Ball, like Fama, also limits behavioural finance to a narrow stream of positivist modelling, and event studies, which is abound with anomalies. These two critiques have been seen as demonstrating a limited understanding of what behavioural finance is, as well as narrowing the methodological focus through a positivist attack which asserts the core assumptions and research approach of EMH and capital market studies over the anomalous and conflicted evidence of a methodologically weak area that behavioural finance inhabits.

Yet there is an irony in such a position: whilst the broad aim of behavioural finance may be to challenge behavioural assumptions of financial agents (Barberis and Thaler, 2003), the methods and tools used in behavioural finance studies are no different than those in mainstream modern finance (Frankfurter, 2007b).

Implications

Reflecting upon his career to date in academic finance, Jensen - a key figure in modern finance, particularly through his work on agency theory (with Meckling, 1976) - recalls the struggles that he and many contemporaries - Fama being one of them - had with regards to publishing their empirical work:

"There was this revolution in finance going on. Lots of new work was coming out, and the established journals, not only in finance but also in economics, but especially in finance, were being run by people who had a different vision of the world. And so a lot of us young guys were having trouble publishing this great stuff in established outlets. Gene Fama and I and, Bob Merton were all young guys. I think we were all assistant professors, but maybe one or more of us was an associate. We decided we would start our own journal... So all the new stuff that was going on in finance got submitted to us, or a very large fraction of it... What I call the new stuff is what was coming out about efficient markets, the capital asset and pricing model and all the implications of that. And goodness knows that a lot of it got published in our journal because it was generally frowned upon in the standard journals"²

In the same interview, Jensen frames this as a Kuhnian paradigm struggle wherein the editors of prestigious journals were part of an old paradigm of finance, and protagonists of modern finance represented the coming challenge of a new paradigm:

"Well, you know, Kuhn wrote an entire book about this entitled: *The Structure of Scientific Revolutions*. And the basic thesis of that book, which provides lots of examples, is that scholars and scientists don't actually create new things, even though that is what we are supposed to be doing. What we do instead is run tests that prove that the theories we currently accept are, in fact, right. So, this was a lot of new stuff hitting the finance profession in a very small period of time... what we referred to as the old finance guys, the finance professors from around the world who were running the journals and, and the profession quite understandably weren't wildly enthusiastic about this stuff. It didn't occur to them as finance. What is this stuff about regressions and all of that kind of stuff? So, it's a common event."³

¹ The criticism is slightly deeper than this as Fama claims that the models in the studies he analyses contain misspecifications about the use of post-event returns and pre-event abnormal returns

² This is taken from an interview by Michael Jensen conducted by The American Finance Association, as part of their Masters of Finance series. The interview is available online at: <http://www.youtube.com/watch?v=OWP6Hg2bvmo> (last accessed: 30 September 2013)

³ *ibid.*

What emerges from these vignettes, and Jensen's invocation of Kuhn, is a sense of struggle within finance; a struggle that happened in the early to mid 1970s. Contemporaneously, a similar struggle appears to be taking place regarding the status of empirical research in academic finance, however the challenges presented by alternative paradigms and approaches appear to be closed down rather quickly by proponents of modern finance. Through the redevelopment of behavioural finance as a quantitative project under positivist methodology, the status of the rationality theorem of financial agents remains unchallenged. Frankfurter's (2007a; 2007b; with McGoun, 1999) analysis of Fama's (1998) categorisation of behavioural finance as yielding anomalies to the EMH is revealing in so much that he considers Fama's riposte to preserve the core axioms of modern finance against critique by presenting behavioural finance as a weak and inconsistent attack upon notions of efficiency in modern finance; this is done at the expense of viewing behavioural finance as a separate area of study. Furthermore, Frankfurter (2007b) also claims that limited academic probing into the heart of modern finance has made the methods of modern finance (which he characterises as financial economics) somewhat "immune to the rich literature of other alternatives" (2007b: 85).

What is at stake then is a general lack of progress within academic finance, where adherence to the methods of modern finance is viewed by the finance elites, such as Fama, as being preferred to developing new or separate areas of study (cf Frankfurter, 2007a). Fama's (1998) refusal of a behavioural finance critique of EMH also denies the possibility of conflicting empirical evidence, which dogmatically (cf Frankfurter, 2007b) preserves EMH as foundational to the practice of finance, and by presenting challenges as anomalies recasts behavioural finance as special case theory within EMH. This denial of challenge also impacts upon the possible falsification of prevailing theories developed under modern finance, as empirical contradictions to key tenets and theories remain unquestioned. Instead, that behavioural finance is seen as an extension of modern finance in method and objective (Frankfurter, 2007b) points to the constraint of any human element or context of investment to observable variables. As a consequence the human element in behavioural finance has been included through positivist and mainstream methods. By way of a recent example in the mainstream and prestigious *Journal of Financial Economics*, Kumar et al (2011) probes differences in religious background and attempt to model the influence of religious background on investment strategy, seemingly providing some analysis of the human aspects of investment strategy, however this corresponds to Frankfurter's (2007b) conclusion that the positivist capture of behavioural finance - through instigating a wider research program based on positivist method - merely extends the influence of mainstream research approaches.

Furthermore, Fama's (1998) critique of behavioural finance has created an apparent EMH debate, and proponents of both sides of this supposed efficiency divide are producing "high-quality modelling and empirical evidence" (Arnold, 2002: 633). This furthers the methods of mainstream finance by constraining debate through econometric models. In addition, the view that behavioural finance is somehow representative of a challenge to EMH has also been codified within mainstream pedagogical textbooks, such as Arnold (2002; 2012) who claims that research in behavioural finance is a "forceful attack" (2002: 633; 2012: 580) on EMH. This position may have pedagogical consequences as it maintains the belief that the market is completely efficient and free of any political, social or cultural influences (cf Kay, 2009), preserving ethical assumptions that finance, as a technical practice, is also free of such influences.

And due to this lack of a wider behavioural perspective, the drafting of behavioural finance also becomes a social science issue, as the potential for interdisciplinary research in finance appears limited. Within accounting, often regarded as a sister, or related, discipline to finance (see Roslender, 1992), there is a strong tradition of interdisciplinary research which has expanded the perspectives and theories under which accounting is studied. For instance, behavioural theories of accounting have developed alongside theorisation from other fields as diverse as psychology, history, sociology and philosophy (Roslender and Dillard, 2003) whilst in finance there appears to be a monopoly on behavioural perspectives that is grounded in economics (Kolb, 2010; Frankfurter, 2000) - this expansion in accounting also allows researchers to understand accounting not solely as a technical endeavour, but one which has a social and organisational role (see Roslender and Dillard, 2003). This social aspect to interrogating financial practice is largely absent from academic finance (Ardalan, 2000; 2001; 2008), as theorisation appears to be mostly conducted in a functionalist, and hence technical, vein (Ardalan, 2008). The corresponding theory of society that underpins the positivist and functionalist finance is one where all facets of human activity, hence behaviour, can be directly measured and that this activity corresponds directly to a cause and effect model of ontology that underlies all human nature (Ardalan, 2001; 2008; Bettner et al, 1994). In other words, human activity and behaviour is mediated by a series of deterministic forces.

Similarly, reasserting a behavioural finance through the lens of positivist enquiry entails a lack of wider ethical aspects to potential behaviour that is constricted to a limited perspective based on a number of unrealistic assumptions of human nature (cf Kolb, 2010), specifically that financial agents' motivations, through positivist enquiry, are narrowly equated with pursuit of profit, and managerial intent can be seen as inconsequential (Horrigan, 1987). The potential for engendering research imbued with wider motivations, such as a radical humanist interpretation of behavioural finance, could be limited as moral and ethical incentives for behaviour are crowded out (cf Heath, 2010) in favour of monetary ones.

What thus emerges from the dominance of positivist methodology in finance is a constraining of research diversity which may limit the potential for disciplinary expansion. To be sure, some finance academics already recognise this and argue that the dominance of few research approaches is potentially damaging to finance, highlighting that the adherence to monoparadigmatic research has created a research culture wherein positivism is seen almost as a sort of default position, or even as a type of research best practice. Frankfurter (2006) recalls his formative years in academic finance, recounting how he had conducted positivist-based research without any reflection at all on the epistemological or ontological issues of his choice. In a later book (Frankfurter, 2007a) he claims that several colleagues were also guilty of a lack of methodological contemplation.

Frankfurter (2007a) has also expressed fears that such heavy emphasis upon a positivist method within the discipline has transformed the nature of promotion, such that researchers conducting non-positivist research might struggle to be published in the higher-ranked, or more prestigious, journals which are often favoured when applying for promotion or tenure; this is a view supported by other finance and accounting academics (Baker, 2002; Everett et al, 2003). There are also suggestions (ibid.; Williams, 2003) that this can impact upon younger, or early career, researchers in finance where the pressures to publish have fostered a widespread adoption of positivist methods as the default research practice. And on a sinister note, Frankfurter (2000) also notes that PhD awarding committees in finance heavily favour positivist approaches, suggesting that PhD theses drawing from non-positivist approaches are far less frequent. This is also linked (Frankfurter, 2007a; Reiter and Williams, 2002; Williams, 2003) to possible control over the empirical direction of finance, as a discipline, by a group of academic elites who set methodological rules, and guidelines for the interpretation of empirical results (Reiter and Williams, 2002), consequently indoctrinating new and young academics into the axioms of a methodologically superior positivist finance whilst simultaneously preventing engagement in debate and methodological pluralism.

The issue of positivism as a default research approach is well documented within specific local contexts of academic accounting also (Lukka and Mouritsen, 2002; Merchant, 2008; Reiter and Williams, 2002; Williams, 2003), and some within the debates have pointed to the potential lack of progress being made in accounting if the majority of research is conducted through one paradigmatic position. On this issue, Lukka and Mouritsen (2002) highlight the possible silencing of insights which could be gained by through different approaches; they go further and state that the generalisations determined through positivist research could also be enhanced by cross-referencing findings yielded in positivist research with findings from methods as diverse as field research or case studies, creating a deeper and more vibrant body of theoretical knowledge of accounting. It is perhaps the same outcome that is at stake within finance.

Whilst behavioural finance has now been largely dominated by positivistic approaches, such statistical studies may equally be enhanced by alternative methods and methodologies. For example, interviews with traders could be used to augment or deepen any statistical findings over potential seasonal affects on trading activity. Lucey's (2000) call for finance research to include a focus on the human context of investment might thus be met by including methods that explicitly examine the motivations or attitudes of investors. Indeed, there is a growing body of research which is beginning to focus on investors and financial agents (for an example see Knorr Cetina and Bruegger, 2002; for an overview see Pelzer, 2012), suggesting that there is much to be gained from such a pluralist or triangulated avenue. This might also encourage finance researchers to consider how the possible interactions between theory development, empirical knowledge and research methods (which, according to Frankfurter (2000; 2007a) is missing from finance) could be integrated to yield a more complex understanding of financial agents' behaviour, and finance more generally. Additionally, the more political forms of research that might stem from an engagement with alternative paradigms, such as those documented by Ardalan (2008), could also be used to reinterpret current findings. De Goede's (2005) project, for example, is concerned with destabilising contemporary knowledge of financial practice by conducting a sustained genealogy of financial thought from the establishment of credit market late 17th century through to 1990s.

By engaging with archival material from both London and New York De Goede analyses the emergence of financial thought throughout specific time periods, and exposes conflicting (and time-specific) meanings of credit, money and the market. This historical study is based heavily in genealogy: a method of historical investigation utilised by French philosopher Foucault (1984) to investigate the elements of life that are without history, such as sexuality. For De Goede a conventional history of finance is politically charged by presuming that the tools of modern finance emerged in an evolutionary manner that meet espoused needs of financial agents and market participants, but a genealogical analysis is not based on a linear and evolutionary view of history. Instead, the genealogical history of finance is deeply rooted in socio-cultural contexts and the techniques and theories of finance have emerged with politically contested foundations; on this point, De Geode claims that such meanings of finance have shaped institutions and regulations and have been impactful in asserting finance as a rational, technical and scientific practice; however, by focusing on the political emergence of financial through, De Goede's genealogy disrupts the mainstream position that finance is a rational and objective practice.

Thus, by way of conclusion, there is much that might be gained by extending the focus of "behaviour" in behavioural finance. This is an important claim to make owing to the perceived capture of behavioural finance by those researchers practising the strong mainstream tradition of positivist finance (cf McGoun and Frankfurter, 1999; Frankfurter, 2007a; 2007b) which minimises understandings of behaviour to a very narrow set of, primarily, economic criteria. At stake in this position is not only a challenge to the development of behavioural finance, but also a significant challenge to the discipline of finance. By constraining knowledge creation to mostly positivist methods, understanding of complex finance phenomena is incomplete. The debates in behavioural finance presented herein, therefore, present an opportunity to researchers in finance to (re)examine the current state of empirical dominance in the sub-discipline and to broaden the methodological base through which finance currently interrogates notions of behaviour, as well as to confront the methodological dominance in finance which, according to some in the field, is stifling progress. This becomes, therefore, a social science matter in as much it is a finance one.

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