Performance measurement in the Australian on-line securities marketplace

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Abstract

This study examines performance measurement in on-line securities companies in the Australian marketplace. Marketing managers of seven on-line stock brokerage companies in Australian capital cities were interviewed and their on-line strategies and approaches were systematically reviewed and analysed. The findings suggest that only four of the seven companies were able to articulate a core value proposition and that only two companies used performance measurement in strategic decision-making about the on-line component of their businesses. None of the firms was able to draw a direct connection between the performance measures implemented and the value proposition they claimed to offer to their customers. These findings have important implications for both practitioners and academics as they indicate a substantial deficiency in both the theory and practice of on-line performance measurement. Avenues for further research in the area of on-line performance measurement are suggested.

Keywords

Financial services, Electronic commerce, Performance measurement (quality), Stock markets

Introduction

Competition is a mechanism for identifying winners and losers but, in order for competition to have any meaning, there must also be some criteria for measuring performance. In most pursuits, participants operate in a highly constrained environment and all participants know what they have to achieve to win. When the environment is undergoing rapid change and fast-paced growth, knowing where the company stands is not just important, it is critical.

But what does it mean to know where the company stands? Performance has been described in many different ways but perhaps the best and most succinct way is to ask: Have we met our objectives? (or, in other words, did we accomplish what we set out to do?). This is a simple question but the answer is a complex one.

There are a number of reasons why the answer is of interest to companies. Specifically, as Koslowski (2000) suggests, firms want to know that what they are doing is meeting or exceeding shareholder expectations. The shareholders have invested their money in the firm and the firm repays that investment through earnings. These earnings may be short-run, but they may also be long-term, especially where new markets are being developed. Along the way, firms need to be able to show that management is operating effectively, that they are doing things to which customers respond appropriately, that they are keeping shareholders informed and that all of this is accomplished while exercising due diligence in case performance is not as expected.

The desire to improve performance has led many companies to consider e-business as an option in their business plans (Weill and Vitale, 2001). However, the adoption of electronic commerce in normal business practice has radically changed the distribution of forces in the traditional marketplace. As Kauffman et al. (2002, p. 2) explain, if the impact of new technology is not associated with changes of the model of value creation and value appropriation with respect to their customers , the company faces competitive disadvantage in the market. It is worthwhile pointing out that new technology per se eventually tends to lose value as it becomes more accessible and more widely adopted (Peteraf, 1993).

A recent study by CBI/ PriceWaterhouseCoopers (2001) included a special e-business survey conducted at the end of 1999. The survey revealed that the first movers into the e-commerce arena were securities traders:

Seventy eight percent had been pursuing an e-commerce strategy for more than a year (CBI/PriceWaterhouseCoopers, 2001).

Retail bankers were second. The Internet laggards were the managed funds:

This is consistent with the view that the less tangible or complex, in the case of financial services, a product or service is, the more it is purchased or utilised, the faster the companies offering it will go on-line. In all the financial services sectors the threat of pure e-businesses to the dominance of established institutions has receded (www.pwcglobal.com).

Previous academic research (Ryals and Payne, 2001; Park and Campbell, 2001) has shown that the financial sector is the most advanced sector in the application of new and sophisticated Internet technologies through the provision of on-line banking and broking services. The convergence of stockbroking and the Internet has created a new marketing channel, posing new challenges to the traditional forms of the business. It has been recognised that on-line stockbroking firms are able to expand markets faster, improve services and reduce costs (Keene, 2000).

From this mixture has emerged the phenomenal success of on-line brokers in Australia. This is possibly due to the significant cost savings they have been able to achieve compared to traditional brokerage firms. It is additionally significant that these on-line brokers made their debut at about the same time that “mom and pop” shareholders were becoming acquainted with the stock market. The Telstra float and the demutualisation of the AMP Society were two key motivators for people to acquire shares. The result is that approximately 7.6 million Australians now own shares directly or through managed funds (Asia Times, 2000).

The timing of the floats, coinciding with the availability of on-line brokers, has allowed many inexperienced people to enter the stock market. In 2001, about 120,000 people, of a total of approximately 300,000 listed traders (Marshall, 2001) were trading on-line (Zampetakis, 2001b).

Given the number of people who are now transacting on-line in the stock market - with those trades forming between 20 and 50 percent of total ASX trades (Marshall, 2001) - clearly this industry is one that the public has embraced, making the Australian financial sector a significant market in its own right (Marshall, 2001). Moreover, the total value of assets traded on-line in this market is approximately A$21 billion (Bryant, 2002). Keeping in mind that the worldwide value of on-line retailing is just US$48 billion (Greenspan, 2003), it is obvious that on-line stock trading comprises a substantial proportion of this market.

The extension of the traditional stockbroker s business to the on-line environment via Internet technology means much more than simply providing a Web page as a gateway to facilities for on-line trading. It not only opens opportunities for growth in the number of individual investors involved but also allows for a significant decrease in the cost of transactions - $1 off-line compared to 1c on-line (Zampetakis, 2001a).

To this end, this paper investigates performance measurement in Australian on-line securities companies. Specifically, it examines the manner in which these securities companies measure their on-line performance. It begins with a review of the relevant literature and proceeds to a description of the method used to investigate on-line performance measurement. The results of the investigation are interpreted and discussed. The paper concludes with suggestions for further research.

Linking business strategy to on-line performance

Rust and Lemon (2001, p. 98) discuss the impact of e-service opportunities on consumer behaviour and consumer expectations of the firm. According to these authors, consumer expectations are locked in three specific areas: the importance of the buying experience, the importance of control, and the role of personalisation. All of these areas are explored in the off-line world very well but they are in need of further study and clarification in the on-line environment. In their conclusion, the authors suggest three key areas for further research: the effects of the e-service revolution on consumer behaviour; the influence of agents on the marketing process; and new strategic models and metrics. This last area of suggested research, together with the findings of Park and Campbell (2001), have led us to the conclusion that, despite the relatively long history of performance measurement theory and the advanced work that has already been done in the area, there are still problems in defining what performance actually is and, consequently, in determining how a company s performance can be measured.

Neely (1999) states that business performance measurement is now on the management agenda and, in recent years, considerable research attention has been paid to performance measures in general (Marr and Neely, 2001; Kotha et al., 2001). The intent of this present article, however, is not to offer another definition or to develop new critical dimensions of performance measurement, but to consider to what extent this enriched performance measurement theory is implemented in financial services companies with an on-line business component. This research moves from a focus on conceptual problems regarding the method of integrating a set of performance indicators to the analysis of how on-line companies use these indicators to measure their performance and link it with their strategic and operational decision-making processes.

Financial success is only one aspect of a firm s performance (Bhargava et al., 1994) and, according to Hax and Wilde (2001), is the indicator of its economic value. New business models have evolved with the establishment of on-line business (Amit and Zott, 2000; Hoque, 2000; Craig and Jutla, 2001).

At the same time, some well-established and widely-adopted business models such as:

…the direct-to-customer connection and full service relationship are undergoing radical change, taking advantage of the newly ubiquitous electronic infrastructure (Weill and Vitale, 2001).

The second and more complicated counterpart of performance is customer bonding. This is consistent with the findings of Strivers and Joyce (2000). At the heart of customer bonding is the creation of a unique customer value proposition. Knowledge about customers and an understanding of their needs create the foundation for customer attraction, satisfaction and retention:

Finally, a unique value proposition to the client should encompass all of the firm s portfolio of businesses and functional capabilities (Hax and Wilde, 2001, p. 380).

Therefore, it is essential to study not only the financial performance of a firm but also the firm's customer value proposition.

The e-business strategies of financial services firms often still have features that are more technology-driven than customer-driven (Agrawal et al., 2001). Why technology-driven strategy became more sustainable is explained by Agrawal et al. (2001, p. 33). They note that:

…on-line brokerages spent upwards of USD50 million a quarter, and as much as USD25 million on launch campaigns, when total revenues were unlikely to pass USD30 million…

This implies that e-commerce firms find it easier to focus on the technology side of their operations than on other areas of the business. In addition, D Souza and Williams (2000, p. 227) suggest that effective performance measurement should reflect contribution to the overall competitive position. Taking these two ideas together suggests that successful on-line business performance measurement should extend beyond the mere measurement of technology. Therefore, as Marr and Neely (2001) suggest, studies of on-line performance measurement must examine more than just the metrics, the means of measuring performance; they must also examine the links between the chosen measures and the strategic and operational decision-making.

Marr and Neely (2001) identified concerns about the ability to analyse and interpret data. Ryals and Payne (2001) highlighted the potential problems and benefits to having access to excellent data. Additionally, Ryals and Payne (2001) as well as Knowledge@Wharton (2000) identified the potential value of having access to, understanding and employing advanced data analysis. Thus, on-line businesses have huge performance measurement potential, much of which is untapped. Therefore, the question is raised as to what these firms would see as their information preferences in terms of any information they could have.

Rust and Lemon (2001) defined the full potential of e-service as:

Two-way, interactive communication, personalization, real-time adjustments to a firm s offerings, new forms of consumer access.

The richness of these potential offerings implies that there are many new ways in which performance and its measurement becomes important. It seems likely that finding these new ways will continue to present on-line firms with new challenges.

Previous work in financial services

Prior to conducting the interviews, the authors surveyed published research on on-line brokerages around the world. The most pertinent study was done in the UK but the results are potentially applicable to Australia as well.

In the UK, investors who have both traditional and on-line accounts said that traditional brokerages provided a better service than their on-line counterparts. This implies that on-line brokerages are not (yet, at least) the answer to the needs of all clients. The problem is in the broker-client relationship, in which at least some investors (especially those who are particularly busy and/or wealthy) want someone to hold their hands and look after their financial well-being. This implies a need for new content and personalised services on-line in order to upgrade these services to the standard expected (Scullion and Nicholas, 2001).

In addition, the move from free to subscription-based information on-line is making it harder for on-line traders to make decisions about their financial investments. This heightens the demand for extra services for on-line customers.

The era of establishing on-line stockbroking firms coincided with the dot.com boom. The loyalty of customers was not a problem since neither service providers nor customers had enough time to analyse the market situation. However, customers were anxious to buy shares of valuable Internet companies quickly in order to receive the high rate of return on their investment and brokerage companies struggled to improve technical aspects of their Web sites and Internet applications in order to serve more customers at greater speed.

Method

Performance measurement systems change over the life cycle of a firm (Miller and Friesen, 1984). Systems emerge over time, in response to changes in strategic goals, the business environment, and the size of the firm (Miller, 1996; Aldrich, 1999; Mintzberg, 1994). The lack of prior studies on performance measurement in e-business and the complex systemic nature of performance measurement systems, related as they are to organisational strategy, context and knowledge base (Miller and Friesen, 1984), suggest that an exploratory, qualitative study is necessary to explore this area (Eisenhardt, 1989; Gummesson, 1991; Miles and Huberman, 1994). In this present study, this involved in-depth interviews with 13 managers responsible for the on-line marketing operations of seven on-line securities firms in Australia.

The sample selection was purposive (Strauss and Corbin, 1998; Eisenhardt, 1989), as the authors were interested in interviewing only those managers responsible for establishing and maintaining the performance of on-line operations. Firms were chosen from a list of 17 Australian stockbroking companies who had on-line trading facilities (that is, customers can buy and sell shares without physical interactions with a broker). Following an initial approach, seven firms agreed to participate in the study. The size of the firms, as defined by market share, ranged from four large to three very small (Zampetakis, 2001b). Five of the firms were e-business stockbroking units of established retail banking firms. The other two were specialist on-line stockbroking companies. This sample was representative of the Australian on-line stock-broking industry.

Interviews were conducted with the managers at their place of work, and lasted from approximately 45 minutes to one-and-half hours. In one case, four staff members were interviewed at the one firm as they were jointly responsible for the on-line marketing activity of the firm. Interviews were conducted by the first author, with the exception of the first interview, which was conducted by all the authors to identify relevant questions for the study. The interviews were semi-structured and involved the use of an interview guide which helped to retain the focus of the study (Yin, 1994). During the interviews the respondents raised relevant issues that were not foreseen. These were subsequently followed up by the interviewer.

Interview questions were based upon the relevant literature, and included the following:

- What is the core value proposition of your business?
- How do you specifically measure performance?
- How is performance measurement linked to operational decisions?
- What would be the information preferences if your company were able to have access to any type of information without cost?
- What challenges and problems have you faced in relation to your performance measurement system?

Additional questions concerning customer demographics, Web site design and navigation and customer management systems were also addressed. Prior to the interviews, the researchers examined each firm s Web site. The interviews were recorded on audiotapes and transcribed by an assistant. Cases were analysed for like themes using within-case and cross-case analyses by all three authors (Eisenhardt, 1989; Miles and Huberman, 1994). Individual memos were written on each case study, identifying areas of interest, and potential themes, via the use of open (unrestricted) and in-vivo (taken directly from the participants) codes (Strauss and Corbin, 1998). Following this, a cross-case table was developed (Miles and Huberman, 1994), which compared and contrasted each of the cases. Based upon this analysis, a number of key theoretical categories were developed. An initial report was sent out to the participants for comment. The use of multiple researchers to collect and analyse the data and the gaining of feedback from the informants improved the validity of the study (Yin, 1994).

The next three sections in this paper present, analyse, and discuss the answers to the interview questions and use them to address the paper s overall research question: How do Australian securities firms measure their online performance? This process starts by setting the context within which each of the firms is operating through addressing the firms core value proposition and then moves to addressing questions related specifically to performance measurement issues.

Findings

It is critical when using case research to present some of the findings in the words of the participants in order to improve the validity of the findings for the reader (Yin, 1994; Eisenhardt, 1989). To this end a number of quotes are presented to highlight key issues that arose in the interviews. The summary of comments on each case is presented in Table I.

Core value proposition

The research revealed that, where a value proposition was identified, there was diversity in the set offered to the market. However, some companies, especially the smaller operators, experienced initial difficulties in expressing their value proposition:

... it is a difficult question to answer in a sense (Small 1).

... That’s actually what we are looking at at the moment … (Small 2).

... That is problematical for me because we are really in the middle of segmenting client base and developing the value proposition around those (Small 3).

The rest of the firms identified that these propositions varied considerably and included training investors, offering expertise to novice investors to reduce risk, and having highly flexible sites targeted expressly at expert traders who needed responsiveness and flexibility but no hand-holding:

Table I
Cross-case analysis of interview questions

	Stockbroking firms						
Research question	**Small 1**	**Large 1**	**Large 2**	**Large 3**	**Small 2**	**Small 3**	**Large 4**
Core value proposition	Not specified clearly	Specified	Specified	Specified	In the process of development of core value proposition	In the process of redesigning	Not specified clearly
Specific performance measures	Do not have a system for performance measurement	Focus on technical side of their site	Use specific software to identify clients' interest and tracking them	Use specific software and statistics packages for monitoring of their customers	Preliminary system, mostly monitor customers' log-ins	Focus on the content of offered services, Web site design and statistics	Technical measures mainly
Link between operational decisions and performance measures	No link at this point in time	Focus on advertising and other marketing tools and customers' behaviour	At the starting point to link marketing actions and investors decision	Analysis of challenges and problems, passing it to management and developing new projects	No link at all	Functionality of business is achieved and the next step is to link the performance measurement to the operational decision	Feedback on Web performance comes to marketing group
Information preferences	To receive feedback about their site	Knowledge about new products and new facilities that can be offered to the market	Real figure of investors who use their site	They have all information and statistics	Information about potential client base	Feelings of investors in respect to offered services (customer satisfaction)	To identify why investors look but do not buy
Challenges and problems	Focus only on monitoring of technical side of their Web site realising that other issues are not covered	One problem is signing up on-line to the service and another is that clients use information but trade through other firms	For a while the number of registrations has been increased without intensive marketing, but now the firm realises that some actions have to be undertaken	Signing up to the services on-line. Use on-line surveys to identify areas for the development	The major problem is low technical capacity and it forces clients to use other sites in combination	Attempt to make site more interactive according to new demands. Collect feedback in data warehouse but experience difficulties in its interpretation	Getting data out of it that can inform marketing decisions

If on-line brokerage customers had been with us, they would not have suffered the losses most people did in the tech-wreck (Large 4).

To provide tools to help people trade and … educate themselves ... (Large 1).

Mainly I would say… for them to be able to track their investments… to have transactional services a lot more interactive and [make] them a lot more able to manage their accounts independently… (Large 2).

… is the ability to not only trade shares, but also to look at other financial products that will assist [clients] towards wealth creation down the line (Large 3).

Specific offerings included extensive training on-line, tools offered to help with on-line trading, tracking tools for customers to follow investments, and financial advisors available for on-line comment. These offerings extended to different systems of payments from cheques through direct debit from a bank account to needing a dedicated clearance account to the ability to pay for shares on a credit card. None of the firms offered a generic, undifferentiated value proposition. Thus, each was targeted to a specific market segment with the precision of the targeting varying from player to player. One of the key restrictions was the level of regulatory controls which prevents customers from having a fully integrated online experience, as it is impossible to establish a relationship with an on-line broker without going offline:

Our dear friends - the ASX [Australian Stock Exchange] want everything to be paper based… it is slowly changing. It takes time (Large 3).

Up until now there has been a lot of paper work and things… ASX require a signature… so it had to be a hard copy (Large 1).

In other words, registering requires off-line interaction between the client and the organisation. However, while other studies have also indicated that this is a problem for on-line service providers (Scullion and Nicholas, 2001), Australian stockbrokers are currently prevented from addressing this issue directly.

One of the other results was that, irrespective of the stated value propositions mentioned by the firms (where these existed), the majority of the firms were interested in imitating and outdoing the competition regardless of whether the competition was attacking their market segments. For example, firms were asked to compare themselves to an auto manufacturer. Specifically, they were asked, if their competitors were to introduce a new model that was priced at the same level as existing cars but was gold plated, whether they would follow suit. The answer was a nearly uniform, unequivocal “Yes”:

Every time a competitor does something, we have to respond in some way; it changes the dynamics so we would have to have a response (Small 3).

The range of offerings indicates that there is variety in the positions staked out by the large and small players in this field. Ideally, these positions will be supported by performance measures that assess how well the position is established and maintained in the marketplace.

Specific performance measures

Performance measures identified by the firms included monitoring the site for down- time, generally through clients’ complaints when the system fails; basic monitoring of their site and tracking the customers navigation through the site; and detailed analysis of Web traffic both through on-line monitors and to interaction with customers:

... we get client feedback all the time. We get countless e-mails every day… (Small 2).

Through our internal tests in terms of site speed and things like that (Large 1).

In terms of performance, we look at the service… what are we offering… how do people react to our navigation systems… we look at sales… (Small 3).

I have done some on-line surveys just with e-mail [of] investors and advisers… (Large 2).

The focal point of this last firm initially was to investigate the customers' attitude towards their Web site. As the business was developed the focus was transferred to marketing in terms of studying impact of the company brand and advertising upon customers.

While most companies collected at least some information on the use of their sites, one company was not really interested in the data it collected:

We do have access to client log-ins and things like that. Tend not to look at them too much (Small 2).

Another firm admitted that, at that stage, it did not measure any indicators of their performance:

... in a sense I suppose we don t (Small 1).

Notably, it was mainly the small companies that had no formal measurement systems in place, although even those companies that did collect information about on-line performance were not at all clear about how they should use the information:

I think as we keep going ... we will have [find some way] to use the statistics and look at how many investors are transacting on-line (Large 2).

In many cases, the performance measurement was unduly focused on the performance of the Web site and not at all on the performance of the company as facilitated by the Web site. To illustrate the difference, in the first case firms count raw clicks and hits; in the second, the firm relates activity on the site to company goals and objectives:

… we can then track how many trades they do, [and] who does it (Large 3).

… we are now looking at advertising and things like that… where people are going, what is the biggest hit area of the site… for the strategic marketing point of view (Large 1).

One telling result is that despite every interview starting with a direct question on the firm s value proposition and a discussion of the value proposition offered by the firm, none of the firms drew a direct connection between the performance measures implemented and the value proposition they claimed to offer. In other words, none of the firms was able to point explicitly to performance measures that indicated whether or not the fundamental basis on which the firm was founded - the delivery of their value proposition - was being accomplished.

Link between operational decisions and performance measures

In only three cases was it clear that the performance measures were used directly in strategic decision-making about the business. In one case, the performance measures from the Web were combined with those from other data sources (the data warehouse, for instance) and condensed into a monthly report that was circulated for discussion at board meetings:

… we have done it twice this year, we have produced an e-commerce metrics report which is really looking at the company as a whole (Large 2).

In two cases, strategic decision making and performance measurement was on the agenda. At the beginning stage of launching of on-line trading facilities firms did not:

… do any hard marketing to [their investors]

… and the number of registrations for the sites was increasing (Large 2).

But...

... I think now we are starting a lot (Large 2).

... that is what we have to do next, we can change course, it keeps the momentum going

... Also, we know we have got our functionality right, we need to sort of change the presentation… (Small 3).

In one specific case, the on-line traders focused almost exclusively on technical competence issues. In other words, how quickly does the site respond to a query? What is the time lag between a trade request and the trade being carried out? And how long does it take for the Web site to load onto the users browsers? However, in this case, the person interviewed was the technical manager of the operation; the company did not have an equivalent marketing manager position. Interestingly enough, this configuration has resulted in a focus on Web site performance with a slight corresponding focus on marketing opportunities to existing and potential clients:

...we are now looking at advertising and things like that, so obviously where people are going, what is the biggest hit area of the site… (Large 2).

Two of the small companies admitted that operational decisions were not linked to performance measurement. In one case it was explained that the firm outsourced its trading facilities and only monitored the Web site. In the other, it was claimed that they were limited by a lack of technological skills.

One of the large companies demonstrated a direct link between diverse sorts of activities linked to Web site performance and managerial decisions. The information about its Web site and trading facilities was collected, analysed and systematised and then passed to managers and to the Board of Directors. If the matter was found to be significant it was worked out and supported as a new project:

... we've got a lot of e-mail support feedback so they are monitored fairly heavily in terms of who is asking for what, what are the common themes and then they go to management and a new project [is proposed] that will be assessed at that point…managers have direct access to [the board of] directors… (Large 3).

Information preferences

All of the firms were asked what their information preferences would be if they were able to have, free of charge, any information they wanted. In one particular case, the firm felt that they had all the information they needed. There was nothing they could have which would allow them to improve their offering or service to their clients:

I suppose at the moment really nothing because we are getting so much information off the site, statistical work, and it's all very well set out, it's organised .. . (Large 3).

The remaining firms were able to suggest particular areas in which they would like to improve their information. One firm wanted to know what the next big product would be in the market:

.. . what new product can we offer that can just blow the market apart (Large 1).

Another company wanted to find out who is really using the Web site, whether from their tracking software or from keying through to the data warehouse:

It is a nasty question ... to know the actual real [number of people who are using Web site] would be nice (Large 2).

Small firms generally had more humble preferences and their interests revolved around

…any sort of feedback about our Web site (Small 1).

…how many hits we have had on the site, it would be good to know the potential client base we have (Small 2).

Still another firm was concerned with conversions between applications and actual users of the Web site - in other words, how many people had sent in applications and not used the site:

…they have filled out an on-line application but they never signed it and sent it in to us so those sorts of stats (Large 1).

The next firm was most concerned with which areas of the Web site generated the most interest for their customers and thus how to better develop the Web site for the future:

I would want to know which particular areas of our Web site generated the most interest (Small 1).

Finally, one company wanted to develop an understanding of the feelings people were having as they used their Web site - how happy, or frustrated were they with each stage of the process:

…that would be enormously useful, that is what you are getting at, that feeling of really wanting to know how they are feeling at the time… (Small 3).

Therefore, with the exception of one firm that felt it already knew everything there was to know about the market, and the firm that was product focused, the remaining firms were very customer-centric. Their preferences revolved around knowing more about how to service and retain their customers and prospects more effectively. While this may not be directly linked to their value proposition, it is heading in that direction at least.

Challenges and problems

All firms indicated varying levels of problems with the way they interacted with their customers through their Web sites. For example, the most common theme raised was how difficult it was for prospects to sign up for their services. As mentioned earlier, they are hamstrung by requirements placed upon them by the regulatory agencies:

...which is very much around self-service for clients with some sales being affected [because] you still can’t do everything on-line, including transmission of your application form with money (Small 3).

Other firms are trying to move to one to one marketing but cannot while the back office (the data warehouse) is isolated from the Web site:

...we have definitely thought about it and talked about it, but until we have got our back-end system fully integrated into our Web site you wouldn’t do it (Large 2).

One company expressed its concern that prospects came to the site, downloaded the application form, but never actually registered. In a highly competitive and transparent environment, customers study the different trading facilities and options before making a final decision in choosing an on-line stockbroker:

They are just signing up to get an idea (Large 1).

Further, some companies indicated that as their customers matured, they became more demanding. This is because the customers are now beyond the basics and require more than the information provided on the Web site:

What we are actually trying to do now is we are trying to empower the user to do everything themselves. We are pushing more and more things like the share transfers and things like that, broker to broker transfers, withdrawing money, everything is on-line now so that it gives the person the ability to do it all themselves and get the information that they need (Large 1).

They need more advanced training and information on how to invest successfully:

There is enormous push for DIY globally, people are getting more interested in looking up their own affairs than paying commercial brokerage to either an adviser or financial planner. We are there to assist them (Large 3).

This is also reflected in the fact that the customers are spending increasingly less time on the site as they become more adept. This causes problems for one of the common measures of Web site success - stickiness (Kippola, 1999). This measure assumes that as a firm builds better relationships with its customers, they will visit its Web site more frequently and spend more time there. This appears not to be the case in this industry. Rather, the opposite appears to be true (Johnson et al., 2002).

Another common theme was the feeling that the customer wanted to have a personal relationship with an adviser, but it seemed that the Web-based system was separating the clients from the advisers:

On the adviser s side they’re less likely to actually give feedback on-line (Small 3).

One of the most interesting findings from the interview process was that in one company s desire to increase understanding of the market and meet customer demands, it had focused its attention on creating a new Web site interface, which was supposed to be more friendly and accessible. However, after collecting various records, information and statistics, the firm experienced difficulties with data interpretation:

Our feeling and that’s what we are responding to… we know it [Web site] has got to be more interactive, more summarized… we do have feed back into data warehouse but once again we don’t have a lot of science behind [finding out] what they actually do on the Web (Small 3).

One of the large companies attempted to address and prevent all potential issues through regular surveying of their customers and therefore offering them most innovative products and services:

We do some surveys. We have launched a couple of new products in the last year or so… We’ve done surveys…to see people’s responses and what they thought about it, …so we know more of our clients and then we will go back to those clients and say: guess what, it’s on the site, go for it (Large 3).

Finally, two small companies realised that their systems, focused mainly on professionals, were excluding share traders without large capital bases. One of these companies explained that a lack of resources was limiting its development in this area:

We ... understand it and as a consequence we've realised that the system that was first developed was far more slanted towards what we would consider the professional trader or the very large volume trader and doesn't really see the smaller trader as Joe Bloggs sitting out at home (Small 1).

We are outsourcing [and] we are very controlled in what we do… We know some who will use us for their orders, they will put their orders through us but they will actually look at other Web sites for pricing (Small 3).

This research question, which concluded each interview, showed that despite a technical orientation being the initial driving force for most of the firms, companies both implicitly and explicitly emphasised their desire to establish and maintain a long lasting relationship with their investors. From the above discussion it is apparent that while some firms were not able to articulate their value proposition or were most keen to improve the technical characteristics and design of their Web site, at the same time all the problems and challenges they experienced were about customer satisfaction and retention. This implies that the firms are, again, heading in the right direction with their ideas behind why they have a Web site, but they have still not caught up in terms of how they are measuring its performance.

Discussion

One of the goals of this research was to discover what metrics are currently being used to assess on-line performance. In this goal it was unsuccessful. There are no consistent, or even appropriate, measures currently in use in this industry. Instead, firms are still grappling with what will allow them to chart their path to success. They are searching, in some cases diligently, for these measures but they are not always finding them.

Despite the fact that this sector is held out as one of the key success areas in e-business, there is an alarming distance between the visions, goals and objectives of the firms, the value propositions they offer to accomplish them and the performance measures put in place. Given the importance of linking performance measures to those things that are directly related to the achievement of corporate objectives, this is a worrying result. Firms should seriously consider drawing tighter links between what they are trying to achieve and how their performance is measured. This will allow them to focus better on the aspects of their business that are critical to competitive success.

The findings of this study have indicated both good and bad trends in performance measurement in this industry. Laudable is the fact that segmentation and fine-tuning of the value proposition are well advanced and taken seriously. Less satisfactory is that there is still not a clear link between corporate objectives and the measures being used to assess achievement. In fact, some of these measures are not provided to strategic decision makers, leaving them without the necessary guidance to keep the operation moving in the right direction. Finally, there seems to be a process underway in the industry that is seeing both the brokers and their customers mature. While this process is creating clients who want more advanced information and support, brokers are still trying to develop ways to deliver and monitor their delivery.

Internet technologies and their applications are relatively new and it would be premature to expect the fullest range and highest quality of services from stockbroking firms at this stage. The on-line stockbroking companies have yet to put their Internet delivery capabilities to full use in improving their performance.

Managers of on-line brokerages will soon find it necessary to lift the quality of their on-line performance assessment. New entries into the marketplace, such as Merrill Lynch, have placed more pressure on existing firms. Specifically, managers are going to have to draw direct linkages between what they are trying to do with their on-line brokerage businesses and how they measure the success of these ventures. Without that direct link, strategic decision-makers are unable to make fully informed decisions and thus run the risk of making poor decisions based on inadequate information. The literature on performance measurement is unequivocal on this aspect: managers need to be able to monitor how well the firm is achieving stated goals and objectives. This industry is yet to deliver performance measurement at this level.

To sum up, it should be noted that during the interview process some questions raised by the researchers were quite novel. Very often the interviewees admitted that either it was a difficult question to answer or they were in the process of reconsidering and redesigning their businesses to embrace new market demands. Post-interview communications from some of the firms acknowledged that the discussed issues gave them a new perspective on their business development and has helped them to move forward.

Conclusions and managerial implications

This exploratory research was aimed at providing insights into the current state of business performance measurement in on-line stockbroking companies. Specifically, its aim was to address five questions raised by the literature.

In an industry which has been claimed to be a leader in on-line services (due to their early adoption and implementation of e-commerce), and presumably the commensurate performance measurement, we found very little direct evidence of performance measurement in the strict sense of the word. Firms were often focused on what could easily be measured as opposed to those things that would assist them in making strategic or operational decisions. In fact, there was not one case of a clear link between a firm s value proposition and their performance measurement. Thus developing metrics for dot.com companies is seen as a rich avenue for further investigation with the development and supplementary testing of an appropriate framework being the goal of such work.

Another aspect of the on-line environment that seems to have been overlooked by some firms is the desire by clients to have an identical (but cheaper) experience on-line as they would with a live broker. Specifically, on-line customers are after the same support and advice as is available through off-line channels.

However, not all is bleak. It seems that these companies are in the initial stages of moving to a directed performance measurement strategy. The range of measurement approaches being used suggests that this industry is still sorting out how best to measure performance. In fact, it seems that performance (which should be a unique concept for each firm) was not always well defined in the minds of those people responsible for measuring it. While a range of measures makes sense, these measures must still be linked to the key success factors or key performance indicators of the firm in order to be useful in strategic and operational decision making. It seemed many measures were collected, not because they should be, but simply because they could be.

This necessarily meant that many of the performance measures were technical in nature and focused on the performance of the site, as opposed to how well their value proposition was delivered. Those that are moving toward a more directed performance measurement strategy are moving toward the notion of measuring things that are related to customer service, satisfaction and retention. However, what is unclear is the degree to which these firms see performance as a multidimensional construct requiring diverse measures (Bhargava et al., 1994).

Furthermore, the wide variety of value propositions indicates that this industry has taken segmentation seriously and is pursuing strategies that are focused on building real or perceived strengths. This is a positive trend to be seeing in such a fledgling industry.

From a management perspective, an important implication of this research is that on-line companies should link performance measurement with their business strategies through delivering value to all groups of stakeholders, which in turn results in monitoring and systematic modification of their measurement system.

Limitations and directions for further research

One of the limitations of this study is that no attempt has been made in this research to improve the performance measurement schemes employed by the various companies. Future research could be directed at testing and improving the scheme itself, especially in light of changes brought about by technology implementation within the services sector.

Specifically, there is a need to develop research that examines the logical consequences of various performance measurement schemes. In addition, we need research that will address the lack of understanding of how to measure on-line performance. Current systems are inadequate, as they do not link firm strategy to performance measures. Therefore there is a need to develop a set of business-based metrics for on-line performance measurement.

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