Disclosure and dividend signalling when sustained earnings growth declines

Khaled Hussainey
Accounting and Finance Division, Stirling Management School, University of Stirling, Stirling, UK, and
Jinan Aal-Eisa
Department of Business Studies, Higher College of Technology, Al-Khuwair, Sultanate of Oman

Received 9 September 2008
Revised 29 January 2009
Accepted 5 February 2009

Abstract

Purpose – The purpose of this paper is to examine whether voluntary disclosure and dividends signal future earnings for decline earnings growth firms. It seeks to inform regulators (and managers) about the potential benefits of increased disclosure and increased dividends to investors for firms that suffer an earnings decline after a sustained period of annual earnings growth.

Design/methodology/approach – The event study methodology is used to examine the behaviour of 33 non-financial UK firms after a decline of their sustained earnings growth. It also uses the computerised content analysis to count the number of forward-looking sentences in the annual report narratives. It calculates changes in disclosure and dividends in the year of earnings growth declines and examine their association with the abnormal future earnings.

Findings – Consistent with prior research, it is found that increasing dividends does not convey value relevant information about future earnings for decline earnings growth firms. However, based on disclosure signalling theory, it is found that increasing levels of forward-looking information in annual report narratives is an important mechanism for signalling future earnings for these firms.

Practical implications – For an effective communication with the stock market in the years of earnings decline after sustained period of growth, managers should give high priority to developing an appropriate and complete set of forward-looking information in their annual reports. This will enable investors to better anticipate firms' future prospects. The results suggest that if forward-looking statements in annual report narratives contain value relevant information for investors, then regulators should consider a compulsory narrative section (i.e. operating and financial review) in the annual report.

Originality/value – This paper is the first to study the value relevance of voluntary disclosure for decline earnings growth firms.

Keywords Disclosure, Earnings, Financial reporting, Dividends, United Kingdom

Paper type Research paper

Introduction

Dividend signalling theory is one of the challenging topics in behavioural accounting and finance literature. It suggests that dividend changes contain value relevant information about the profitability and it is used as a signal for firms' future performance. There are a number of studies that examine the association between dividend announcements and firms' future earnings prospects. Modigliani and Miller (1958) was the first to examine the value relevance of dividend policy. However, they argued that dividend policy is irrelevant to firm's value under certain hypotheses.

Managerial Auditing Journal
Vol. 24 No. 5, 2009
pp. 445-454

0268-6902
DOI 10.1108/02686900910956801

Since the publication of Miller and Modigliani's (1961) seminal work on dividend irrelevance, considerable research has been done to investigate dividend signalling theory. However, the results are mixed. For example, some studies found a positive association between dividend changes and future performance (Pettit, 1972; Aharony and Dotan, 1994; Chen and Wu, 1999; Nissim and Ziv, 2001; Stacescus, 2006; Hussainey, 2009). On the other hand, others had failed to support this positive association (Watts, 1973; DeAngelo *et al.*, 1996; Peterson, 1996; Benartzi *et al.*, 1997; Grullon *et al.*, 2002; Ap Gwilym *et al.*, 2004; Skinner, 2004; Lie, 2005; Goddard *et al.*, 2006; Al-Malkawi, 2007; Vieira and Raposo, 2007).

Another interesting line of research in the field of signalling theory is related to those papers that examined dividend signalling for decline earnings growth firms. Decline earnings growth firms can be defined as those firms that have suffered an earnings decline after a sustained period of annual earnings growth. In the present study, we focus on those firms that have earnings growth for at least four years before their earnings decline.

Nowadays investors are concerned about the profitability and future performance of these firms. DeAngelo *et al.* (1996) examined dividend announcements of decline earnings firms in the USA after the growth for at least nine years. They found that there is no association between dividend changes and future earnings. Similarly, Ap Gwilym *et al.* (2004) examined UK firms which had at least five years of annual growth followed by a recession period and found that dividend is not an important signal for these firms.

Dividend is a well-known technique used to signal firm's future prospects. Another important technique to signal the future performance is increasing the levels of voluntary disclosure (Hussainey and Walker, 2009). Therefore, it is worthwhile to consider the effect of disclosure signalling for decline earnings growth firms. A large number of studies have examined the extent to which firm's voluntary disclosure is used to signal future performance (Clarkson *et al.*, 1994; Hussainey *et al.*, 2003; Schleicher *et al.*, 2007; Hussainey and Walker, 2009). A consistent finding of these papers is that voluntary disclosure signals firms' future prospects.

Based on the discussion above, our paper aims to contribute to the existing voluntary disclosure literature by examining disclosure signalling for a special group of firms that suffer from a decline in their earnings after at least four years of annual earnings growth. We are interested to know the extent to which signalling theory is valid for this special group of firms. In fact, prior studies focus only on dividend signalling; however, we examine and compare the effect of dividend and voluntary disclosure signalling on predicting future prospects for decline earnings growth firms.

The paper is organised as follows. The next section reviews prior literature followed by a section describing data and methodology. The analyses and empirical results are then presented while the final section of the paper concludes with the main findings and provides lines for future research.

Literature review

Only a limited number of studies have examined signalling theory for decline earnings growth firms. To the best of our knowledge, only DeAngelo *et al.* (1996) and Ap Gwilym *et al.* (2004) have examined this issue. In particular, DeAngelo *et al.* (1996) investigated the dividend signalling theory for a sample of 145 firms listed on the New York Stock Exchange. They focused on decline earnings growth firms between 1980 and 1987 that had at least nine years of earnings growth before the initial recession. They found that there is no association between increasing dividend levels and future profitability. Their results suggest that dividend signalling theory is not applicable to this special group of firms. The results also indicate that investors do not use dividends at the year of earnings growth decline for predicting firms' future earnings. Similarly, Ap Gwilym *et al.* (2004) examined the dividend signalling relationship with future earnings for a sample of 85 non-financial and non-utility UK firms that had earnings decline between 1995 and 2000 after growth for at least five years. Consistent with DeAngelo *et al.* (1996); Ap Gwilym *et al.* (2004) found no evidence on dividend signalling for decline earnings growth firms. These results led us to ask whether decline earnings growth firms are using different communication tools to convey value-relevant information to investors.

In a recent paper, Hussainey and Walker (2009) found that voluntary disclosure narrative and dividend policy are substitutes forms on communication tools for conveying value relevant information about future earnings. As a result, we test to see if voluntary disclosure is an important mechanism for signalling value relevant information for decline earnings growth firms.

A large number of papers have investigated how corporate disclosures signal firms' future earnings. Gelb and Zarowin (2002) and Lundholm and Myers (2002) found that the quality of corporate disclosure, as measured by AIMR-FAF analysts disclosure rankings, is positively associated with the stock market's ability to anticipate future earnings changes. Hussainey *et al.* (2003) and Schleicher and Walker (1999) found that the raise in the levels of voluntary disclosure narrative in the annual report increases the stock market's ability to better anticipate future earnings. Schleicher *et al.* (2007) found that the association between levels of annual report disclosures and share price anticipation of earnings is significant for loss-making firms, but not profitable firms.

None of the above papers make any efforts to examine the importance of voluntary disclosure narrative for decline earnings growth firms. Therefore, the aim of our paper is to examine signalling theory for these firms. Our study is based on the studies of DeAngelo *et al.* (1996) and Ap Gwilym *et al.* (2004) that examined dividend signalling impacts on the future performance of those firms with a recession period after earnings growth era. However, we differ from DeAngelo *et al.* (1996) and Ap Gwilym *et al.* (2004) in one important issue. In addition to dividend signalling, we test the effect of voluntary disclosure on firms' future earnings prospects. To the best of our knowledge, there is no study – to date – examining the usefulness of voluntary disclosure narrative for decline earnings growth firms.

Our disclosure measure is the number of forward-looking sentences in annual report narratives. We focus on annual report narratives for two reasons. First, prior research suggests that annual report narratives are the most important source of information for professional users such as financial analysts (Schipper, 1991; Rogers and Grant, 1997) and different classes of information in these narratives are highly rated by professional and non-professional users (Beattie and Pratt, 2002). Second, annual report narratives are more likely to contain forward-looking information than other sections of the annual reports (Hussainey *et al.*, 2003).

We focus our analysis on forward-looking information due to the fact that a considerable number of UK academic studies provide evidence that this type of information helps stock market participants to better anticipate firms' future earnings prospects (Hussainey *et al.*, 2003; Schleicher *et al.*, 2007; Hussainey and Walker, 2009). Based on the discussion above; we formally test the following research hypotheses:

H1. Changes in dividends do not signal information about future earnings for decline earnings growth firms.

H2. Changes in forward-looking information in annual report narratives signal information about future earnings for decline earnings growth firms.

Research design

Data

UK firms have been chosen from the Forecasting Analysis and Modeling Environment (FAME) database during the period of 2000-2007. We set the following sample selection criteria. First, UK firms should be non-financial and publicly quoted. Second, these firms should have earnings growth for at least four years from 2000 to 2003. Third, these firms should have a decline in earnings growth in either year 2004 or year 2005. Fourth, to examine dividend and disclosure signalling theory, the sample period is extended to two years after the recession year (2006 and 2007). Finally, annual financial data should be available for these firms from FAME for years from 2000 to 2007. These criteria gave us a sample of 33 decline earnings growth firms. Earnings (profit after exceptional items, interest, taxation, extraordinary items and minority interests), dividends, sales, shareholder's funds and industry sectors were collected from FAME. Annual reports are obtained from the Northcote database (www.northcote.co.uk).

Our sample has 13 firms with earnings decline in 2004 (40 per cent of the sample) and 20 with earnings decline in 2005. In addition, 40 per cent of our sample are manufacturing firms and 60 per cent are non-manufacturing ones. They are spread over the industry sectors as business and support services (ten firms), construction and building materials (four firms), general retailers (six firms), food producers and processors (two firms), electronic and electrical equipments (two firms) and other diversified sectors (four firms).

Methodology

To achieve the research objectives, the event study methodology is used to investigate the extent to which changes in dividend and voluntary disclosure signal future performance for decline earnings growth firms. To measure changes in voluntary disclosure narrative, Nudist software is used to calculate the number of forward-looking sentences in the annual reports in the year of earnings growth declines and the year before. We also measure changes in dividend payments [dividends at the year of earnings decline (t_0) $-$ dividends at the year ($t-1$)]. To examine the signalling theory, an earnings growth adjustment model is used to calculate the abnormal future earnings for decline earnings growth firms that increase their dividend payments (or their voluntary disclosure levels) in the year of earnings growth declines.

Event study

We split the research time period over three events; pre-event, on-the event and post-event. First, the pre-event allocated the earnings growth period from 2000 to 2003 and it is identified by ($t-4$) to ($t-1$), respectively. Second, the event period covers the year of earnings decline (either year 2004 or year 2005) and it is identified as t_0.

Finally, the post-event period is to test the future performance for years 2006 and 2007 and it is recognised by $(t+1)$ and $(t+2)$.

Disclosure measure

We use the scoring methodology recently developed in Hussainey *et al.* (2003). The authors automate the generation of disclosure scores for large samples of UK firms through the use of Nudist, a text analysis software package. Annual report narrative sections are those with at least one of the following headings: Financial highlights, Summary results, Chairman's statement, Chief executive officer's review, Operating and financial review, Financial review, Financial director's report, Finance review, Business review and Operating review. All other sections of the annual report are excluded from our analysis (Hussainey *et al.*, 2003).

We identify all forward-looking statements in annual report narratives by electronically searching annual reports narrative sections using the list of forward-looking keywords adopted in Hussainey *et al.* (2003, p. 277). This list includes the following 35 key words: accelerate, anticipate, await, coming (financial) year(s), coming months, confidence (or confident), convince, (current) financial year, envisage, estimate, eventual, expect, forecast, forthcoming, hope, intend (or intention), likely (or unlikely), look forward (or look ahead), next, novel, optimistic, outlook, planned (or planning), predict, prospect, remain, renew, scope for (or scope to), shall, shortly, should, soon, will, well placed (or well positioned) and year(s) ahead. Similar to Hussainey *et al.* (2003) we also include future year numbers in the list of forward-looking key words. Examples from Alexon Group plc – 2004 annual report illustrate the nature of forward-looking information in the annual report narratives:

> We *anticipate* that *trading conditions* will continue to be challenging in the year ahead but remain confident of our ability to further develop the business. (Alexon Group plc – 2004 annual report: Chairman's statement, p. 4).

> We *estimate* that this *cost* will be recovered within eighteen months through reduced sourcing costs. (Alexon Group plc – 2004 annual report: Chief Executive's Report, p. 5).

In the above examples, the chairman of Alexon Group plc makes a strong forecast about future trading conditions and future costs. We believe that by providing forward-looking information in the annual report narratives, corporate managers are hoping to improve the information reflected in stock prices.

To distinguish voluntary disclosure narrative increasers firms from others, the annual report in the initial year of decline (t_0) and the year before of decline $(t-1)$ are text-searched. If firm's disclosure score are high (low) in the initial year (t_0) compared with disclosure scores in the year before of decline $(t-1)$ then these firms are classified as disclosure increasers (disclosure decreasers).

Abnormal future earnings

Following DeAngelo *et al.* (1996) and Ap Gwilym *et al.* (2004), we use the abnormal future earnings of the growth adjustment model to investigate dividend and voluntary disclosure signalling impacts on the future performance. Abnormal future earnings calculated as total actual earning after the declining period minus total expected earnings over the same period, whereas expected earnings were those equal to the earnings in the recession period (t_0) compounded forwards at historical growth rate for the earnings in year ($t-4$) to year ($t-1$). Then, standard the results by shareholders' funds of the period before the initial decline ($t-1$), as expressed in the equation below:

$$\text{Abnormal future earnings} = \frac{\sum \text{Actual earning } (t+1, t+2) - \sum \text{Expected earning}(t+1, t+2)}{\text{Shareholders' funds } (t-1)}.$$

Empirical results

Descriptive analysis

Tables I-III show the descriptive analysis. Table I Panel (A) shows that majority of firms in our sample are classified as non-manufacturing 60 per cent (20 firms) and the rest are manufacturing firms. The non-manufacturing firms include retailers, wholesalers and service businesses. Table I Panel (B) shows that the sample spreads over the industry sectors into business and support services, construction and building materials, general retailers, electronic and electrical equipments, food producers and

Table I. Distribution of the sample size relative to the initial year of decline

	Number of firms	Percentage
Panel (A): fame database classification		
Categories		
Non-manufacturing	20	60
Manufacturing	13	40
Total	33	100
Panel (B): detailed industry sectors classification		
Industry sectors		
Business and support services	10	30
Construction and building materials	9	27
General retailers	6	18
Food producers and processors	2	6
Electronic and electrical equipments	2	6
Others	4	12
Total	33	100

Table II. Dividend changes in the initial year of earnings decline

Dividends	Number of firms	Percentage
Dividend increases	26	80
Dividend decreases	7	20
Full sample size	33	100

Table III. Voluntary disclosure changes in the initial year of earnings decline

Firms	Voluntary disclosure changes	Percentage
Disclosure increases	18	55
Disclosure decreases	15	45
Full sample size	33	100

processors and other diversified sectors. It is also clear from the table that business and support services together with construction and building materials firms represent 57 per cent of the sample size.

In the year of earnings growth declines, firms differ in their dividend decisions. Correspondingly, Table II shows that most of firms decided to increase dividends in the decline year (80 per cent of the sample), while 20 per cent of the sample decreases their dividends payments levels. This percentage is consistent with Ap Gwilym *et al.* (2004) who found that 78.8 per cent of their study sample of UK firms increases their dividends payments levels to convey value-relevant information for investors about firms' future prospects. In DeAngelo *et al.* (1996) only 68.3 per cent US decline earnings growth firms increased their dividends levels.

Table III shows that 55 per cent of sample increases their voluntary disclosure in order to make the investors more confident about the firm's future prospects during the years of earnings growth decline. The remaining 45 per cent of the sample reduce their levels of voluntary disclosure narrative.

Results

Table IV shows our empirical results. Table IV Panel (A) shows negative abnormal future earnings results in the year of decline for firms that increase or decrease their dividend payments. These results are consistent with the US study by DeAngelo *et al.* (1996) and UK study by Ap Gwilym *et al.* (2004). It is possible to conclude that managers are overoptimistic and try to fool investors by increasing cash dividend payments in the year of earnings growth decline, even if the expected future earnings will be worse in order to defend the firm's reputation in the market (DeAngelo *et al.*, 1996). Therefore, the negative association between dividend changes and future performance indicates a question of whether dividend increase is a response for favourable prospects or just to satisfy disappointed shareholders about firm's earnings (Ap Gwilym *et al.*, 2004). Based on this result, we accept *H1*.

In contrast, Table IV Panel (B) shows positive abnormal future earnings (12 per cent) for firms that increase their voluntary forward-looking disclosure in annual report narratives. This result supports signalling theory and indicates that voluntary disclosure changes convey value-relevant information that helps investors to forecast future earnings for decline earnings growth firms. Mainly, when the annual earnings decline occurs after annual growth for several years, firms are varied in their dividend and disclosure policies; however, the results of our paper suggest that increasing levels

	Number of firms	Abnormal future earnings using growth adjustment model
Panel (A): dividend changes		
Dividend increasers	26	−0.11
Dividend decreasers	7	−0.06
Panel (B): voluntary disclosure changes		
Disclosure increasers	15	0.12*
Disclosure decreasers	18	−0.01

Note: Significant at the *1 per cent level

Table IV. Empirical results

of forward-looking information in annual report narratives is the only important tool to convey value relevant information to investors about firm's future performance for firms experiencing an earnings decline after several years of annual earnings growth. Based on this result, we accept *H2*.

Conclusion

This study examined signalling hypothesis for decline earnings firms after the growth for at least four years, based on a sample of 33 non-financial and publicly quoted UK firms. In particular, it investigated dividend and voluntary disclosure signalling relationship with future performance of these firms by measures the abnormal future earnings for growth adjustment model.

The empirical results showed that the majority of the sample (80 per cent) increased their dividend payments in the year of earnings decline. Consistent with DeAngelo *et al.* (1996) and Ap Gwilym *et al.* (2004), we found negative abnormal future earnings for dividends increasers and decreasers. These findings suggest that the change in dividend levels is not an important signal for future prospects for decline earnings growth firms. Furthermore, by using Nudist software, we found 55 per cent of the sample increased the level of forward-looking voluntary disclosure in the year of earnings decline. We also found positive abnormal future earnings for firms with increasing levels of forward-looking information in annual report narratives. This suggested that voluntary disclosure is an important mechanism for signalling future earnings for decline earnings growth firms. This research provides a clear benchmark about the relationship between dividend, voluntary disclosure and future performance. Moreover, upon our best knowledge there is no study that investigates the association between disclosure and future performance for decline earnings growth firms. Therefore, this research contributes to the disclosure literature by examining signalling theory in the recession period.

Our findings are limited in several aspects. For example, to achieve the research objectives, the sample selection criteria limited the number of firms under investigation. Therefore, future research is needed to analyse a large number of firms and to examine the potential factors that potentially drive the change in dividend and voluntary disclosure in the year of earnings growth declines. Another interesting issue for future research would be to consider the factors that determine the choice between dividends signalling and disclosure signalling as alternative forms of financial communication for decline earnings growth firms (Hussainey and Walker, 2009).

References

Aharony, J. and Dotan, A. (1994), "Regular dividend announcements and future unexpected earnings: an empirical analysis", *Financial Review*, Vol. 29 No. 1, pp. 125-51.

Al-Malkawi, H.N. (2007), "Determinants of corporate dividend policy in Jordan: an application of the Tobit model", *Journal of Economic & Administrative Sciences*, Vol. 23 No. 2, pp. 44-70.

Ap Gwilym, O.A., Seaton, J. and Thomas, S. (2004), "Dividend signalling when earnings growth declines", working paper, University of Southampton, Southampton.

Beattie, V. and Pratt, K. (2002), *Voluntary Annual Report Disclosures: What Users Want*, research report, ICAS, Edinburgh.

Benartzi, S., Michaely, R. and Thaler, R. (1997), "Do changes in dividends signal the future or the past?", *The Journal of Finance*, Vol. 52 No. 3, pp. 1007-34.

Chen, C. and Wu, C. (1999), "The dynamics of dividends, earnings and prices: evidence and implications for dividend smoothing and signalling", *Journal of Empirical Finance*, Vol. 6 No. 1, pp. 29-58.

Clarkson, P.M., Kao, J.L. and Richardson, G.D. (1994), "The voluntary inclusion of forecasts in the MD&A section of annual reports", *Contemporary Accounting Research*, Vol. 11 No. I-II, pp. 423-50.

DeAngelo, H., DeAngelo, L. and Skinner, D.J. (1996), "Reversal of fortune: dividend policy and the disappearance of sustained earnings growth", *Journal of Financial Economics*, Vol. 40 No. 3, pp. 341-71.

Gelb, D.S. and Zarowin, P. (2002), "Corporate disclosure policy and the informativeness of stock prices", *Review of Accounting Studies*, Vol. 7 No. 1, pp. 33-52.

Goddard, J., McMillan, D.G. and Wilson, J.O.S. (2006), "Dividend smoothing vs dividend signalling: evidence from UK firms", *Managerial Finance*, Vol. 32 No. 6, pp. 493-504.

Grullon, G., Michaely, R. and Swaminathan, B. (2002), "Are dividends changes a sign of firm maturity?", *The Journal of Business*, Vol. 75 No. 3, pp. 387-424.

Hussainey, K. (2009), "Do dividends signal information about future earnings?", *Applied Financial Economics Letters*, available at: www.informaworld.com/smpp/content~db = all?content = 10.1080/17446540802403635

Hussainey, K. and Walker, M. (2009), "The effects of voluntary disclosure and dividend propensity on prices leading earnings", *Accounting & Business Research*, Vol. 39 No. 1, pp. 37-55.

Hussainey, K., Schleicher, T. and Walker, M. (2003), "Undertaking large-scale disclosure studies when AIMR-FAF ratings are not available: the case of prices leading earnings", *Accounting & Business Research*, Vol. 33 No. 4, pp. 275-94.

Lie, E. (2005), "Operating performance following dividend decreases and omissions", *Journal of Corporate Finance*, Vol. 12 No. 1, pp. 27-53.

Lundholm, R.J. and Myers, L.A. (2002), "Bringing the future forward: the effect of disclosure on the returns-earnings relation", *Journal of Accounting Research*, Vol. 40 No. 3, pp. 809-39.

Miller, M.H. and Modigliani, F. (1961), "Dividends policy, growth, and the valuation of shares", *Journal of Business*, Vol. 34 No. 4, pp. 411-33.

Modigliani, F. and Miller, M. (1958), "The cost of capital, corporation finance and the theory of investment", *American Economic Review*, Vol. 48 No. 3, pp. 261-97.

Nissim, D. and Ziv, A. (2001), "Dividend changes and future profitability", *Journal of Finance*, Vol. 56 No. 6, pp. 2111-33.

Peterson, S.P. (1996), "Some experimental evidence on the efficiency of dividend signaling in resolving information asymmetries", *Journal of Economic Behavior & Organization*, Vol. 29 No. 3, pp. 373-88.

Pettit, M.L. (1972), "Some aspects of the aggregation problem in the dividend and earnings relationship", *Journal of American Statistical Association*, Vol. 67 No. 339, pp. 552-9.

Rogers, R.K. and Grant, J. (1997), "Content analysis of information cited in reports of sell-side financial analysts", *The Journal of Financial Statement Analysis*, Vol. 3 No. 1, pp. 17-30.

Schipper, K. (1991), "Analysts' forecasts", *Accounting Horizons*, Vol. 5 No. 4, pp. 105-21.

Schleicher, T. and Walker, M. (1999), "Share price anticipation of earnings and management's discussion of operations and financing", *Accounting & Business Research*, Vol. 29 No. 4, pp. 321-35.

Schleicher, T., Hussainey, K. and Walker, M. (2007), "Loss firms' annual report narratives and share price anticipation of earnings", *The British Accounting Review*, Vol. 39 No. 2, pp. 153-71.

Skinner, D.J. (2004), "What do dividends tell us about earnings quality?", working paper, University of Chicago, Chicago, IL.

Stacescus, B. (2006), "Dividends revisited: an in-depth look at the relationship between dividends and earnings", working paper, University of Zurich, Zurich.

Vieira, E.S. and Raposo, C.C. (2007), "Signalling with dividends? The signalling effects of dividend change announcements: new evidence from Europe", Universidade de Aveiro, Aveiro.

Watts, R. (1973), "The information content of dividends", *Journal of Business*, Vol. 46 No. 2, pp. 191-211.

Corresponding author
Khaled Hussainey can be contacted at: khaled.hussainey@stir.ac.uk