The Information Content of Interim Management Statements

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Abstract

We contribute to the current EU debate about mandatory versus voluntary quarterly reporting. We make this contribution by empirically examining a key argument made by the proponents of a voluntary quarterly reporting regime, namely that interim management statements, IMSs, are unlikely to provide any incremental information to equity investors and hence should be made voluntary.

The empirical analysis proceeds in two stages. In the first stage we follow Beaver (1968) and calculate price variability and trading activity on the IMS publication day and test whether these metrics are significantly greater than comparable metrics from a non-report period. In the second stage we follow Beaver *et al*. (1980) and examine, through a reverse regression of earnings on returns, whether IMS publication day returns are informative of same-year earnings changes.

Our empirical findings provide strong evidence of abnormal price and abnormal trading activity on the IMS publication date. Our results also indicate that this price activity is highly predictive of impending annual earnings changes. These findings are inconsistent with the argument that IMSs are unlikely to contain value-relevant information and are unlikely to be informative of future firm fundamentals.

Keywords:EU Transparency Directive, Interim Management Statement, Kay Report, Share returns, Share trading volumes.

1. Introduction

In late 2004 the EU formally adopted the Transparency Directive and with it introduced a new quarterly statement known as the ‘interim management statement’ or‘IMS’. For atypicalEU countrylike the UKthisintroduction has increased theannual reporting frequency from two to four statements: Listed companies on EU regulated marketsnow have to issue an IMS in the first quarter and an IMS in the third quarter,in addition toa half-yearly report and an annual report. The EU Commission’s key argument in favour of IMSsin 2003wasthat their introduction wasnecessary to increase investor protection and investor confidence after the Enron scandal and also to close the transparency gap between the US and the EU as the SEC hasalways required quarterly reports from US listed companies.But, unlike the quarterly report in the US, theIMS does not need to include a set of financial statements. Instead, an IMS meets the Directive’s requirementsby simply givinga general description of the financial position and performance since the last half-yearly or annual report and by explaining any material events and transactions that have since taken place. These descriptions and explanations can be entirely narrative if the firm so wishes and they are typically no longer than two pagesin length. Thus, in effect, interim management statements are relatively short trading updates, not financial reports per se.

Given the short and flexible nature of interim management statements, relative to its US counterpart, it came to some surprise, at least to the neutral observer,when the EU Commission announcedin 2011 that it intends to make interim managements statements voluntary again. In effect this announcement impliesthat the EU is likely to reverse soon the most important change brought about by Transparency Directive. Perhaps even more surprising than the announcement per sewere the arguments behind the 2011 proposal. These arguments used fundamentally the same topics and themes as those in 2003 but this time not in favour of mandatory IMS statements,but as an argument to abolish them. For example, the EU Commission argued in 2011 that abolishing IMSs should not

have any negative impacton investor protection as the Market Abuse Directive already requires the immediate release of price-sensitive information. This implies, the EU Commission argues, that interim management statementsare redundant as they cannot contain any further price-sensitive information.

In the first part of the paper we test this key argument by the EU Commission in 2011, namely that interim management statements cannot contain any further decision relevant information. For this testwe follow Beaver (1968) and calculateIMS publication day abnormal returns and IMS publication day abnormal trading volumes for a sample of UK IMSs from2009 and 2010.

We find that the price variability and the trading activity on IMS release days are significantly greater than those during a non-report period, especially for non-financial firms, and this observation applies equally to the two years in our sample, 2009 and 2010. In addition, we find that the price variability and the trading activity on IMS publication days are somewhat lower but broadly comparable to the price movements and the trading volumes on preliminary earnings and half-yearly result announcement days. For example, we find that the median non-financial firm's IMS statement triggers price revisions that are only 20% lower than the price revisions associated with the preliminary earnings announcement. In our view this is clear evidence that IMSs are price-sensitive pieces of information and that a key argument behind the proposed abolishment of mandatory IMSs is empirically not descriptive.

On the 22 November 2012the Department for Business Innovation and Skills endorsed the finding of the Kay Report (2012a, 2012b). This is important as the Kay Report(2012a, 2012b)reiterates the EU Commission's 2011 recommendation to remove mandatory IMS obligations. But unlike the EU Commission the Kay Report (2012a, 2012b)does not necessarily challenge the idea that IMSs could trigger significant price movements. Insteadit argues that any such price movement is likely to be a

result of irrelevant and misleading information in IMSs and/or a result of overreaction on the part of equity investors.

In the second part of the paper we empirically test this key argument in the Kay Report by employing a Beaver *et al*. (1980)'reverse'regression of earnings on returns. In particular, we regress same-period annual change in pre-exceptional operating profit on quarter one and quarter three IMS returns, in addition to a number of control variables which have been predicted in the literature to have forecasting ability for annual earning changes. We find that IMS returns, especially first quarter IMS returns, are positively and significantly associated with same-year operating profit change, and this suggests that IMS information is informative about upcoming firm fundamentals. This findingis inconsistent with the argument that IMS event-period price movements simply represent noisy short-term price volatility.

In summary, the present paper contributes to the ongoing debate about the mandatory status of quarterly reporting in the EU. In particular, we provide evidence from UK stock market based reaction tests which appear to challenge several fundamental arguments behind the current proposal to abolish mandatory IMS reporting. Bypresenting these findingswe add value to the evidence collected by the EU Commission and the Kay Report as our results are based on objective capital marketreaction tests, not on subjective survey evidence.

The remainder of the paper is organised as follows. The next section reviews the history of the EU Transparency Directive and the relevant arguments in the Kay Report and formulates our hypotheses. Section 3 describes the sample selection procedure while Section 4 provides some evidence on the type of disclosures that are routinely made in UK interim management statements. Section 5 tests our hypotheses by presenting evidence from abnormal returns tests, abnormal trading

volumes tests,and earnings-return regressions. Section 6 presents some additionalfindings not hypothesised in Section 2. Section 7 concludes.

2. EU Transparency Directiveand Hypothesis Development

After two consultation rounds in 2001 and 2002 the EU Commission presented on the 26th March 2003 its proposal for a new EU Directive on the harmonisation of transparency requirements for issuers of securities on regulated markets. The idea was to 'markedly improve the information made available to all investors about publicly traded companies' as this was seen as 'essential for the functioning of capital markets, enhancing their overall efficiency and liquidity' and as 'an appropriate response to developments in the US, including the Sarbanes-Oxley Act' (Commission of European Communities, 2003, pp.2–3).Greater transparency was envisaged, as far as periodic financial reporting was concerned,through (a) mandating the timely publication of annual reports after the year-end, (b) the formulation of more stringent disclosure requirements for half-yearly financial reports, and most importantly, (c) a newrequirement, for issuers of shares,of 'less demanding'quarterly financial information for the first and third quarter of the financial year. Demanding only 'limited' informationfor the first and third quarter was seen as a solution in the middle of two extreme positions: One extreme position was to demand full quarterly financial reports similar to the requirement in the US. The other extreme was to continue as before and not to require any quarterly information at all (Commission of European Communities, 2003, p.3).

According to the Commission the new quarterly reporting regime was necessary as 'trends on European markets highly depend on developments in US markets'and 'to persuade international investors to diversify further their investments across world stock markets' (Commission of European Communities, 2003, p.14). The Commission argued that – given the growing importance of corporate governance – transparency rules should no longer be left at the discretion of companies and that mandatory quarterly information would provide better investor protection than a voluntary

regime. It would also help to build up investor confidence. At the same time the Commission dismissed the notion that mandatory quarterly reporting (a) leads to short-termism,(b) increases stock market volatility (for which no empirical evidence was available) or (c) imposes extensive additional costs on companies. Finally, the Commission argued that periodic reporting and ad-hocdisclosures of private price-sensitive information as demanded by the Market Abuse Directive 'are different ways of informing the public and not substitutes' (Commission of European Communities, 2003, p.15). While the former is standardised and issued at pre-fixed dates, the latter is variable and under the discretion of issuers.

The EU Transparency Directive was formally adopted on the 17th December 2004. Some of the initial proposals had been watered down, presumablyas a result of political negotiations between the Commission and Parliament/Council. For example, the Directive requires annual reports to be published within four monthsof the year-end, not three months, as initially proposed. Also, the final wordingof the Directive no longer prescribes the disclosure of net turnover and profit or loss for quarterly statements. Instead, Article 6 of the Transparency Directive simply requires, for the period between the beginning of the quarter and the publication date, (a) an explanation of material events and transactions and their impact on the financial position, and (b) a general description of the financial position and performance.

Clearly, the wording in Article 6 suggests that interim management statements are very different from half-yearly reports and annual reports and also very different from US-style quarterly reports. In effect IMSs are lightly regulated trading statements with management retaining considerable control over form and content. For example, the issuer can choose which financial statement line items, if any, to comment on when discussing financial position and performance, and the management is free to present this information either in numerical or narrative form. Also,there is no duty to indicate trends beyond the date the statement is published. Finally, management retains some

control over the length of the reporting period as Article 6 only stipulates that it ‘shall be made in a period between ten weeks after the beginning and six weeks before the end of the relevant six-month period’.

The UK – unlike Sweden, for example– had relatively little experience in 2004 with mandatory quarterly statements. While a number of UK companies, especially those with a dual listing in the US, had prepared quarterly reports in the past, this was a relatively small minority of typically very large companies.Thus, it is no real surprisethat the UK, in relation to IMSs,implemented the provisions of the EU Transparency Directive without any modifications, also known as the ‘copy-out’ approach.There was simply no precedent in the UK for a mandatory quarterly statement thatwent beyond the general requirements in the Transparency Directive. Also, the Financial Services Authority (2006) believed that a lack of detail in the IMS provisions allowedfor a market-led solution where the market –i.e. issuers after consultation with investors – develops best practice.

The new IMS rules were implemented in the UK via the UK Listing Authority’s Disclosure and Transparency Rules (DTR) (which are part of the Financial Services Authority Full Handbook) and became effective for periods beginning on or after 20th January 2007. DTRs also implemented the new shorter deadlines for the publication of half-yearly and annual reports, but overall the EU Transparency Directive had only limited implications for half-yearly and annual reports:the typical UK issuer continued to employ IFRS for full annual and condensed half-yearly reports.

In early 2010 the EU Commission set out to reporton the operation of the Transparency Directive, in accordance with Articles 6(3), 27(3) and 33. In particular, Article 6(3) of the Transparency Directive required the Commission to ‘provide a report […] on the transparency of quarterly financial reporting’ and to ‘include an impact assessment on areas where the Commission considers proposing amendments’. Based on the advicereceived from a number of external studies,regarding stakeholder

perceptions and compliance costs, the EU Commissioninitiateda debate,on the 27thMay 2010, by asking whether there was scope for the transparency rules to be adapted, with a view to increasing the attractiveness of the regulated market for smaller companies. In particular, the Commission argued that it could envisage a scenario where the obligation to publish quarterly financial information would be alleviated for smaller companies. This could achieve cost savings, but, according to the Commission, without undermining investor protection (Commission of European Communities, 2010, pp. 3–4).

Following a conference in Brussels and a formal consultation round insummer 2010, the EU Commission published its formal proposal for an amendment of the EU Transparency Directive on the 25th October 2011. In it the Commission reiterates that an‘[i]mprovement of the regulatory environment for small and medium-sized issuers and their access to capital are high political priorities for the Commission’ (Commission of European Communities, 2011, p. 3). In order to achieve thispriority objective the Commission proposes to abolish the obligation to publish IMSs for *all companies listed on regulated markets* as introducing a special regime for small and medium-sized issuers,SMIs,was considered confusing for investors and thus undesirable. The Commission (of European Communities, 2011, p. 5) argued that abolishing IMSs‘enablesthe small and medium-sized issuers to redirect their resources’ and ‘should reduce short term pressure on issuers’. Also, the Commission (of European Communities, 2011, p. 5) now arguedthat abolishing IMSs ‘should not have negative impact on investor protection’ as ‘investor protection is already sufficiently guaranteed through the mandatory disclosure of halfyearly and yearly financial results, as well as through disclosures required by the Market Abuse […] Directive[.]. Therefore, investors should be duly informed about important events and facts that could potentially influence the price of the underlying securities independently […] of quarterly information’.

The Commission's proposal to abolish mandatory quarterly information and to reverse the most important change introduced by the Transparency Directiveis based, at least in part, on a fundamental reassessment of the amount of periodic information that is deemed necessary to guarantee investor protection.While the Commission argued in 2003 that periodic reporting,including quarterly information,and ad-hoc disclosures aredifferent ways of informing the public, it now arguedthat quarterly informationis not needed for a timely price discovery as the Market Abuse Directive already requiresimportant, price-sensitive information to be disclosedwithout delay. This implies thatinterim management statements, IMSs, are unlikely to contain any further price-sensitive information. This argument leads to our first hypothesis:

H1a: The release of IMSsis not associated with abnormal absolute returns.

H1b:The release of IMSsis not associated withabnormal trading volumes.

H1 is consistent with the Commission's 2011 view about the redundancy of interim management statements but, unlike the Commission,predicts not only a lack of unusual price reaction,but also a lack of unusual trading activity. Examining both types of stock market reaction is consistent with the information content literature which argues that price and trading volume tests complement each other. While unusual price revisions reflect changes in the market opinion, unusually high trading volumes signal changes in individual investors' expectations (e.g. Beaver 1968). Finally,note that the EU Commission, prior to its 2011 proposal, collected evidence on stakeholder perceptions and compliance costs, butnot fromstock market reaction tests. The current study fills this void.

On the 23rd July 2012 Professor John Kay submitted, to the UK Government's Department for Business Innovation and Skills, his final report into 'investment in UK equity markets and its impact on the long-term performance and governance of UK quoted companies'. While the remit of hisreview obviously differed from the remit of the review of the Transparency Directive, there

wasnonetheless some significant overlap. For example, Kay (2012a, p. 9) agrees with the EU Commission that quarterly information can lead to short-termism as ‘analysts and fund managers had become more concerned with quarterly numbers […] and less with the strategic direction of the business’. Also, Kay (2012b, p. 74) reiterates the Commission’srecommendation that ‘[m]andatory IMS […] obligations should be removed’.

Kay (2012a, p. 21) concedes that a call for less disclosure and transparency is against the ‘general principle that more information is better’, a principle which has guided‘regulation of both corporate governance and securities markets in the past’. After all ‘it is hard to disagree with the merits of transparency and disclosure’ as ‘information which is not of use need not be used’(Kay 2012a, p. 21). But Kay (2012a, p. 21) argues that this general principle ‘ignores the considerable evidence from experimental psychology – and everyday life – that it is easy to induce people to act on irrelevant information’. Furthermore, Kay (2012a, pp. 22–23) reports that a ‘large majority of respondents [to his Review] […] considered that quarterly reporting and interim management statements fell into the category of useless or misleading information’and quotes Standard Life Investors as saying that ‘the noise – positive or negative – arising in response to quarterly interim management statements is an unwelcome distraction in the context of encouraging boards to focus on the long term development of the business’.

Ifthe arguments and quotes in Kay (2012a, 2012b) – which were endorsed by the Department for Business Innovation and Skills on the 22 November 2012 –are empirically descriptive, then a return test as in H1is a necessary, but no longer a sufficient test of the information content hypothesis of interim management statements. This is true as any significant price revision might simply constitute short-term irrelevant noise. And this short-term noise isunrelated to fundamental firm performance. Thus, in order to provide a stronger test of the information content hypothesis,we regress, in the second part of the paper, change in annual pre-exceptional operating profit on eventwindow IMS

returns. The arguments and quotes in Kay (2012a, 2012b) suggest that the information contained in IMS releases – and short-window IMSreturns –is unlikely to be predictive of a change in pre-exceptional – i.e. persistent, long-term –operating profit performance. Formally, we test the following null hypothesis:

H2: IMS returns are not associated with same year's change in annual operating profit.

If the null in H2 is rejected, then this providesevidence that a key argument in Kay (2012a, 2012b) – namely that IMSslead to noisy short-term price volatility –is unfounded. Note that the exclusion of exceptional items from our definition of operating profit is likely to increase the persistence of our earnings measure. And persistent earnings changes are likely to be closely associated with changes in fundamental firm value. Finally, note that H2, unlike H1, uses signed returns, not absolute returns, as, for a test of H2,we do not wish to lose the information about good news and bad news inherent in the sign of the IMS return.[1]

3. Sample Selection

We beginour empirical analysis by collecting,for the years 2009 and 2010,IMS release dates for all firms included in the FTSE All Share Index. We collectthese dates from PI Navigator, a global corporate finance and capital markets database with 15 million international company filings, including filings submitted via the London Stock Exchange's Regulatory News Service. Wedo not include in our sample period the years 2007 and 2008. The reason is that interim management statementsbecame effective only for periods beginning on or after 20th January 2007. Thus, many firms did not publish their first IMS before 2008. Andgiven the potential for 'teething' problems, includinglower compliance rates, in the year of first-time implementation,we decided not to include 2008, either.[2] This leaves 2009 and 2010 for inclusion in our sample period. Note that 2009 represents a year from the 'financial crisis' periodwhile 2010 was characterised by a rebound and

improving sales and profit performance. Thus, the two years in our sample represent, in terms of performance and uncertainty, the full spectrum of economic environments.

Our sample selection strategy is documented in Table 1. The starting point is the FTSE All Share Index with 615 constituents in 2009 and 614 constituents in 2010. These are the numbers of firms in the index in June 2009 and June 2010. Subsequently, we lose observations due to (a) missing firmson DataStream, our source for return and volume data, (b) the unavailability of IMS release dates on PI Navigator, or (c) the Transparency Directive exempting firms from publishing an IMS if the firmpublishes a full quarterly financial report instead. This leads to a final sample of 1099 IMSs in 2009 and 1102 IMSs in 2010. These numbers include IMSs in the first six-month period and IMSs in the second six-month period of the financial year. From now on we refer to these two types of IMS statements as IMS1 and IMS2. Finally, note that our sampling strategy does not involve the exclusion of financial firms. Instead, we report,in Section 5, results for financial and non-financial firms separately.

[TABLE 1]

4. Content Analysis

Before we move to a formal test of H1–H2 we wish to provide some background information on the type of disclosures that are routinely made in interim management statements. For that we randomly select 20 non-financial firms each fromthe three indicesthat make up the FTSE All Share Index, namely the FTSE100, the FTSE250,and the FTSE Small Capitalisation Index.[3]For each group of firms – and for the total of all firms –we report in Table 2 the percentages of IMSs that include informationon (a) financial performance, (b) financial position, and (c) material events and transactions. This information is collected through manual, meaning-orientated, content analysis (e.g. Krippendorff 1980; Weber 1990) and is broadly similarto the analysis in Deloitte & Touche

(2007, 2008) (which was for the year of first-time IMS implementation). However, our focus is on what type of information is typically conveyed in an IMS, not on whether IMSs comply with the DTR rulebook.

[TABLE 2]

In Table 2 we group information about a firm's financial performance into statements about (a) 'sales', (b) 'earnings', and (c) 'other' information. For example, statements about 'eps' or 'gross profit margin' are coded as 'earnings' information while references to 'growth', 'progress', 'success' or'outlook' are classified as 'other' information. In addition,we record, for each performance indicator, whether the disclosure (a) is backward-looking or forward-looking, (b) refers to the group rather than a segment,and (c) contains numbers.The underlying definitions and coding rules follow Schleicher (2012).[4]

For statements on a firm's financial position we differentiatebetween general references like 'strong financial position' and comments on individual assets and liabilities, usually 'cash' and 'debt'. We define 'material events and transaction' in line with Deloitte & Touche (2007, 2008) as any information about items like (a) share-buy backs, (b) acquisitions of operations or assets, (c) new or extended loan facilities, (d) asset sales, (e) lease acquisitions, and (f) court cases.

Table 2 allows us to make a number ofinitial observations. First, 90% of all IMSs meet the Directive's requirement to give a general description of the financial performance by making statementsabout therecent sales performancesince the last annual/half-yearly report. Also,references to recent sales performance are higher for large and mid-cap firms than for small cap firms (93% and 96% versus 80%). Second, 45% of all IMSs provide an indication of the recent earnings performance. Third, in most casesbackward-looking sales and earnings information relatesto the

group, not an individual segment. This is in line with the Directive's requirement. At the same time statements about recent sales and earnings performance areoften voluntarily supplemented with quantitative data. For example, 76% = 68% ÷ 90% of backward-looking sales statements are quantitative in nature.Fourth,when IMSs voluntarily provide an outlook for a period beyond the IMS publication date, then references to 'growth', 'progress', 'success' or 'outlook'dominate references to 'sales' and 'earnings' (83% versus 25% and 32%). This disclosure behaviour is understandable as referring to vague, non-verifiable performance indicators minimises the risk that the outlook statement is proved to be ex post inaccurate. Fifth, more than half of all IMSs refer to material events and transactions. Finally, the median IMS statement is not particularly long: A median of 757 words and 21 sentences corresponds roughly to a two-page trading statement.

Overall, the conclusion we draw from the initial evidence in Table 2 is twofold. First, in terms of compliance costs, the burden imposed by IMSs does not seem to be excessive: The median IMS is rather short and typically contains information that even small capitalisation firms should be able to produce at the press of a button. Second, Table 2 provides some prima facie evidence that IMSinformation is likely to be useful to investors: Sales and earnings information, especially if quantitative in nature, is precisely the type of information that should assist in the calculation of fundamental value changes (e.g. Palepu*et al*. 2010).

5. Main Results

The information content tests in H1 followthe tradition of Beaver (1968). In particular, Beaver (1968)definesinformation content as implying (a) a change of equity investors' expectations about the probability distribution of future prices or(b) a change in the optimal holding of a firm's equity in the portfolios of individual investors.Under the former definition one expects the variability of price changes to be greater on IMS release dates than at other times during the year, while under the latter definition one expects the number of shares tradedto be higher on IMS release days than on other

days.While price changes reflect changes in the expectation of the market as a whole, volume changes reflect revisions in the expectations of individual investors.Also, while it is possible to think of scenarios where only one of the two tests responds, if neither test responds, then the alternative hypothesis of information content will be suspect (Beaver 1968).

Implementing price change and trading volume tests raises a number of research design challenges. These challenges are reviewed – for volume tests – in Bamber *et al*. (2011) and include the definition of the trading variable, the definition of normal trading, and the length of the measurement window. We now discuss how the test of H1 dealswith these challenges.

Our trading variable follows Beaver (1968) and Landsman and Maydew (2002) and is based on daily trading volumes, not on the number of transactions per day. Cready and Ramanan (1995) provide evidence that transaction-based metrics are more powerful that volume-based metrics, but this difference is smallfor sample sizesgreater than 100. We divide daily trading volumes by the number of shares outstanding so that the results are not dominated by large firms.[5]

Next we subtract a measure of normal trading volume from the IMS release day trading volume to obtain an estimate of abnormal ('excess') trading volume which isentirely due to the information contained in the IMS statement and not to non-informational ('liquidity') trading. Like Beaver (1968) we estimate firm-specific normal trading volumes from a non-report period. In particular, we define the non-report period as comprising the two intervals$t$–110 to t–11 and t+11 to t+110, relative to the IMS release day$t$, thus obtaining a maximum of 200 non-report period trading days. Unlike Firth (1981), however, we make no attempt at eliminatingtrading days with major news announcements. Instead, we use the median trading volume in the non-report period as an estimate of normal trading volume. Given the lumpy, discontinuous nature of news announcements, it islikely

that the median trading volume is not affected by any type of news. Note that using medians, not means, is also consistent with the recommendation in Bamber*et al*. (2011).

For our price change variable we download from DataStream daily return indices and calculate one-day raw returns,both for the IMS publication date and the 200 trading days in the non-report period. We then transform the signed returns into absolute returns and calculate the difference, DIFF, between the absolute IMS publication day raw return and the median absolute non-report period raw return. This statistic provides the main basis for our test of H1a.[6]

Bamber *et al*. (2011) report that the measurement window for event-period trading volumes varies widely in the literature, from anything between half an hour to up to seven trading days.In order to assess the appropriateness of our one-day measurement window, we tabulate in Table 3 absolute daily raw returns and daily trading volumes for the eleven day window around the IMS release day, i.e. for the interval *t*–5 to *t*+5. We do this separately for financial and non-financial firms.

[TABLE 3]

Table 3 shows peaks of absolute returns on the IMS release day, and these peaks applyequally to the two years in our sample period and to financial and non-financial firms, though, clearly, the peaks are more pronounced for means and for non-financial firms. At the same time there is no evidence that mean or median absolute returns are elevated on any other trading day, not even on *t*–1 or *t*+1. This is consistent with an instantaneous market reaction on the IMS publication date and no prior leakage of information.[7]

For trading volumes we observe peaks on day *t* and somewhat elevated levels linger on for one (or two) more day(s), especially for non-financial firms in 2009. This observation is consistent with the

evidence of positive autocorrelation for trading volumes reported in Bamber *et al*. (2011). Overall, however, we conclude thatthe one-day measurement windowsappear to capture the vast majority of the reaction, even for the trading volume metric.

Table 4 presents formal tests of H1a–H1b. As before we present separate findings for non-financial and financial firms: Panels A and B test H1a while Panels C and D test H1b.Abnormal absolute returns and abnormal trading volumes are reported under DIFF andthe associated p-values are calculated from a one-sample (matched-pair) *t*-test for means and a Wilcoxon signed rank test for medians. Finally, under RATIO we report the ratio between absolute IMS day returns and absolute normal returns and between IMS day trading volumes and normal trading volumes.

[TABLE 4]

In terms of returnswe find positive and highly significant mean and median differences, DIFF, between the IMS returnsand normal returns, and this applies equally to IMS1 and IMS2. For example, for IMS1 we find a mean abnormal absolute return of 2.6 percent for non-financial firms under ALL, and this difference is highly significant, with a p-value of 0.000. We also find that abnormal returns are quite similar across the two individual years, both in terms of mean and median differences, DIFF, and in terms of mean and median ratios, RATIO. Presumably this suggeststhat our findings are relatively stable over time. For financial firms we find much lower abnormal absolute returns which, while still positive and highly significant,are often close to zero, especially if one looks at medians. In principle there are two explanations for this. One is that financial firms offer less informative IMS content than non-financial firms.[8] The alternative explanation is that income streams and asset values of financial firms are easier to predict as they are often based on publicly traded investments. Thus, the content of IMSs is often anticipated through other more timely sources of information.

Overall, the findings in Table 4, Panels A and B, provide clear evidence that IMSs trigger share price changes that are significantly larger than share price changes in the non-report period. This leads to a formal rejection of the null of H1a.

For the trading volume metric in Table 4, Panels C and D, we make observations that are qualitatively quite similar to those in Panels A and B. For example, all mean and median differences, DIFF, between IMS trading volumes and normal trading volumes are positive and highly significant. Also, abnormal trading volumes for financial firms are substantially lower than those for non-financial firms and the median values for DIFF and RATIO are close to zero and one, respectively. In contrast the median RATIOs for non-financial firms are close to 2, very similar to the corresponding ratios in Panel A, and indicating that IMS daytrading volumes are approximately twice as high as normal trading volumes.Overall, the findings in Table 4, Panels C and D reinforce the findings from the abnormal return tests and show that individual investors engage in significantly more trading activity on the IMS publication day. This leads to a formal rejection of the null of H1b.

We carried out a number of robustness tests to see whether the results in Table 4 are sensitive to specific variable definitions. For example, we logged the return index relatives before taking absolute values. Also, we squared the returns as an alternative transformation method. Furthermore, we calculated cumulative abnormal absolute returns, abnormal absolute buy-and-hold returns and cumulative abnormal trading volumes over two- and three-day windows, i.e. over intervals from t to t+1 and from t–1 to t+1. Finally, we followed the 'spirit' in Beaver (1968) and estimated 'market' and 'market-model' residuals and used these residuals instead of IMS day raw returns and trading volumes and instead of non-report period one-day raw returns and trading volumes. We then calculated abnormal absolute returns and abnormal trading volumes based on IMS day residuals and

median non-report period residuals. We find that in all cases the results were (qualitatively) similar to those reported in Table 4.

The testsof H1 arebased on the idea that – if IMSs lead to abnormal price revisions and abnormal trading activity – then the EU Commission's 2011 view about the redundancy of IMS statements is unfounded. In particular, we argued that a rejection of H1a also implies a rejection of the argument thatIMSsare not needed for a timely price discovery mechanism.

A potentialcriticism of our test of H1 is that it equatesprice-sensitive information with information thatleads to a price movement greater than the median price movement during thenon-report period. One could argue that this benchmark is too low and that a moreappropriate test of price-sensitivity requires a benchmark that is larger than the typical return of 1–1.5%provided bythe median price revision during the non-report period.

The ambiguity of what exactly constitutes price-sensitive information arises because neither the Market Abuse Directive nor the DTR rulebook provides a precise definition of price-sensitive information:Neither the EU nor the FSA definesatheoretical percentage movement in a share price which will make a piece of information price-sensitive.

Nonetheless, the FSA (1996, para. 4) has always maintained that certain events have the potential to have a significant effect on a company's share price and hence have to be announced to the market. These events include dividend announcements, board appointments or departures, profit warnings, share dealings by directors, acquisitions and disposals above a certain size, preliminary results,annual and interim results, and right issues.

In Tables 5a and 5b we use the absolute returns and trading volumes associated with preliminary earnings announcements and half-yearly result announcements as an alternative benchmark. In particular, if IMS statements trigger absolute returns which arecomparable to those associated with preliminary earnings and half-yearly result announcements, then this would provide additional evidence that IMS information is indeed price-sensitive.

Tables 5a and 5b compare, for financial and non-financial firms, one-day IMS raw returns and trading volumes against one-day preliminary earnings announcement raw returns and trading volumes (Panels A and B) and against one-day half-yearly result announcement raw returns and trading volumes (Panels C and D). As before, we report the mean and median difference and the mean and median ratio under DIFF and RATIO, respectively.[9]

[TABLES 5a& 5b]

Looking at Tables 5a and 5b we make the following four observations. First, for non-financial firms the absolute returns associated with IMSs are often lower than the absolute returns associated with preliminary earnings and half-yearly results, and the differences are generally significant, especially for medians. Second, the median ratio, RATIO, for non-financial firms lies between 0.7 and 1.0 suggesting thatthe IMS statements triggers price movements that are between 70% and 100% of the price movement associated with preliminary earnings and half-yearly result announcements. Third, for financial firms the picture is mixed:We findthat the differences, DIFF, in absolute returns are generally positive for IMS1 and negative for IMS2. Fourth, the results for trading volumes are once again qualitatively similar to those obtained from absolute returns.For example, for the median non-financial firm, the trading activity on the IMS release day is between 10% and 20% lower than the trading activity on preliminary earnings and half-yearly results announcementdays.In contrast, for the median financial firm the differences are positive and negative but typicallysmall in magnitude.

Overall, the impression we gain from Tables 5a and 5b is that IMSs trigger returns and trading volumesthat are somewhat lowerthan those associated with preliminary earnings and half-yearly result announcements.But this is hardly surprising given that these two latter statements typically include a much more detailed set of financial results and are often seen as the culmination of the annual reporting cycle. That amedian non-financial firm'sIMS statement triggers price movements of 80% of the price movement associated with the preliminary earnings announcementis, in our view,a clear indication ofits decision usefulness. Thus we conclude that the evidence in Tables 5a and 5b further questions the assumption that IMS statements are no longer needed.

The arguments in Kay (2012a, 2012b) suggest that significant abnormal returns are not, in themselves, sufficient evidence of information content as excess price movementsmight well be the result of investors irrationally responding to irrelevant information.We believe that the prima facie evidence in Tables 2–5is inconsistent with this view. For example, in Table 3, Panel A,any 'overreaction' on day *t*could then be expected to be reversed on a subsequent day. But, as we discussed earlier,there is no evidence of elevated price movements on any day other than day *t*. Perhaps even more puzzling, if investors overreact to non-financial firms 'irrelevant' IMS information, why then do investors overreact so much less to 'irrelevant' information in financial firms' IMSs?

To formally examine the claim that excess price movements are often a result of irrational behaviour on the part of equity investors, we follow Beaver *et al*. (1980) and employ a 'reverse' regression of earnings on returns. In particular, we regressdeflated annual change in pre-exceptional operating profit, ΔOP_t, on one-day IMS1 and one-day IMS2 raw returns, $IMSONE_t$ and $IMSTWO_t$. For comparison, we also include one-day preliminary earningsand one-day half–yearly result raw returns, PE_t,and$HALFYEAR_t$. Furthermore, we include,in the regression model,a number of

additional control variables which have been predicted in prior research to have forecasting ability for annual earnings changes(e.g. Collins*et al*. 1994, Gelb and Zarowin, 2002, Lopes and Walker, 2012). These include lagged change in operating profit, ΔOP_{t-1}, lagged earnings yield,EP_{t-1}, lagged book-to-market value of equity, BTM_{t-1}, current and lagged asset growth, AG_t and AG_{t-1},and financial-year buy-and-hold raw returns, RET_t. Finally, we include in the regressionmodel anindicator variable for the year 2010, $DYYEAR_t$, to allow for differences in operating profit growth between 2009 and 2010as a result of changing economic conditions. This yields the following regression model (1):

$$\Delta OP_t = \beta_0 + \beta_1 DYYEAR_t + \beta_2 \Delta OP_{t-1} + \beta_3 EP_{t-1} + \beta_4 BTM_{t-1} + \beta_5 AG_t + \beta_6 AG_{t-1} + \beta_7 RET_t + \beta_8 IMSONE_t + \beta_9 HALFYEAR_t + \beta_{10} IMSTWO_t + \beta_{11} PE_t + \varepsilon_t \quad (1)$$

If IMS statements contain misleading noise unrelated to firm fundamentals, then one would expect the coefficients on $IMSONE_t$ and $IMSTWO_t$, β_8 and β_{10}, to be close to zero and insignificant. Alternatively, if IMS statements contain useful information that allows equity investors to better predict current year's operating profit change, then one would expect $\beta_8$and/or$\beta_{10}$to be significantly positive.

Table 6 estimates regression model (1) for the sample of non-financial firm-years, and reports coefficient estimates and p-values from both OLS and MEDIAN regressions, consistent with our emphasis, throughout the paper, on means and medians. In addition, the table reports a restricted version of regression model (1) which includes the year dummy and the four one-day announcement returns, but not the six control variables.[10]

[TABLE 6]

We start our discussion of Table 6 with the results from the restricted model. For that model we find that the coefficients on $IMSONE_t$ and $IMSTWO_t$are significantly positive in both OLS and MEDIAN, and this leads to a formal rejection of the null of H2. At the same time we observe that the coefficients on$HALFYEAR_t$ and $PE_t$are close to zero and insignificant. Thus, it appears that it is the information in IMS trading updates, not in financial reports, whichispredictive of same-year annualearnings change.

As far as the unrestricted model is concerned we note that the control variables frequently have coefficient signswhich are consistent with our prior expectation. For example, a high market value at the start of the year *t*relative to *t*–1 operating profit suggests that the market is expecting further profit growth at the start of period *t*. This implies that lagged earnings yield, EP_{t-1}, and change in operating profit, ΔOP_t, are negatively correlated. The negative sign on EP_{t-1} confirms this expectation. Also, the news released throughout the financial year should lead to a positive association between ΔOP_t and RET_t. Again, the positive coefficient on RET_t confirms this expectation. Most importantly, the coefficient on $IMSONE_t$ remains significantly positive in both regressions, with p-values of 0.006 and 0.006,while the coefficient on$IMSTWO_t$ remains positive and marginally significant,at least in the MEDIAN regression. Thus,despite the inclusion of a large number of control variables, we continue to reject the null of H2.[11]

In summary, the arguments in Kay (2012a, 2012b) are notwell supported by the empirical evidence: Not only do IMS statements lead to significant price reactions, but,moreimportantly, these price reactions are significantly correlated with upcoming firm fundamentals. That the association between IMS returns and annual earnings changes is stronger for IMS1 than for IMS2 suggests that the informational benefits of quarterly trading updates are strongest at times when the uncertainty about full year earnings is greatest, i.e. early on in the financial year.

We believe further research is needed to better understand why the coefficient on $IMSONE_t$ is larger and more significant than the coefficients on $HALFYEAR_t$ and PE_t. But we note from untabulated regressions of ΔOP_{t+1} on $IMSONE_t$, $HALFYEAR_t$, $IMSTWO_t$ and PE_tthat the coefficients on $HALFYEAR_t$ and PE_t continue to be insignificant. Thus, it appears that the preliminary earnings announcement return is associated neither with current earnings change nor with future earnings change.Perhaps this suggests that IMS statements and financial result announcements serve different functions in capital markets.[12]

6. Further Results

The EU Commission's 2011 proposal for an amendment of the EU Transparency Directive argues that making quarterly information voluntary will allow individual issuers to decide for themselves whether the informational benefit of regular trading statements outweighs the additional administrative burden associated with issuing these statements. Also, the EU Commission seems to assume that blue chip companies will often continue voluntarily with quarterly/regulartrading statements, while smaller issuers are more likely to decide that the informational benefit is small relative to the additional cost, especially as small firms often argue that their quarterly information isfrequently ignoredor overlooked by analysts and investors.

If the information content and/or the visibility of small firms' IMSs are low relative to those of larger firms, then we would expect one-day absolute IMS returns and one-day IMS trading volumes to decrease as one moves from FTSE 100 to FTSE Small Capitalisation firms.To formally test this prediction, we regress one-day absolute IMS returns and one-day IMS trading volumes on two size dummies, one for FTSE 100 companies, $DY100_t$, and one for small capitalisation companies, $DYSMALL_t$. We also include, as a control variable, a dummy variable for financial firms, $DYFIN_t$, as financial firms are typically small capitalisation firms,andas financial firmshave much lower IMS

returns and trading volumes (e.g., Tables 3 to 5).Formally, we estimate the following regression models (2) and (3):

$$IMS_t^{ABSRET} = \beta_0 + \beta_1 DYFIN_t + \beta_2 DY100_t + \beta_3 DYSMALL_t + \varepsilon_t \quad (2)$$

$$IMS_t^{VOL} = \beta_0 + \beta_1 DYFIN_t + \beta_2 DY100_t + \beta_3 DYSMALL_t + \varepsilon_t \quad (3)$$

where IMS_t^{ABSRET} and IMS_t^{VOL} are IMS one-day absolute raw returns and IMS one-day trading volumes, respectively, and $DYFIN_t$, $DY100_t$ and $DYSMALL_t$ are dummy variables which, respectively, take on a value of 1 for financial firms, FTSE 100 firms, and FTSE Small Capitalisation firms, and 0 otherwise.

Table 7 presents the results for regression models (2) and (3) and, like Table 6,reports coefficient estimates and p-values from both OLS and MEDIAN regressions, but the number of observations is larger than in Table 6 as we now employ the full sample of financial and non-financial firm-years and as each firm-year has two observations, i.e. one for IMS1 and one for IMS2. Thus,the number of observations in Table 7 is the same as under ALL in Table 1.

[TABLE 7]

We start our discussion of Table 7 by observing that the estimated intercepts are identical to the values reported under day *t* and ALL in Table 3, Panels A and C, and that the coefficients on $DYFIN_t$are negative and highly significant, as expected. More importantly, the IMS day trading volume is significantly larger for FTSE 100 firms and significantly smaller for FTSE Small Capitalisation firms, relative to FTSE 250 firms.[13] In addition, the absolute IMS day raw returnsare indistinguishable across the three size groups in the median regression, but are larger for small capitalisation firms, relative to FTSE 100 and FTSE 250 firms, in the OLS regression.[14]

Overall,the picture in Table 7 is mixed.The trading volume regression suggests that the information content and/or the visibility of small firms' IMSs is indeed lower, as suggested by the responses to the EU's 2010 consultation process, while the price metricsuggests that the information content and/or the visibility of small firms' IMSs is the same, or even greater, than that of large firms.We believe that this type of inconclusive evidence providesan insufficient basis for reversing a major EU policy initiative, especially as the price metric, not the trading volume metric, is the EU's preferred information content metric:Making quarterly statements voluntary will almost certainly lead to some ofthe IMSs with the largest absolute price movement being no longer issued.

7. Conclusion

The present paper contributes to the ongoing debate in the EU about voluntary versus mandatory quarterly reporting. We make this contribution by empirically examining a key argument which is made by the proponents of a voluntary quarterly reporting regime, namely that quarterly reporting is unlikely to provide any incremental information to equityinvestors and that it should be left to individual issuers to decide for themselves whether and how to best communicate with investors.

Our empirical analysis proceeded in two stages. In the first stage we followed Beaver (1968) and calculatedprice variability and trading activity on the IMS publication day and testedwhether these metrics are significantly greater than comparable metrics from a non-report period. In the second stage we followed Beaver *et al*. (1980) and examined,through a reverse regression of earnings on returns,whether IMS publication day returns are informative of same-year earnings changes.

Our empirical findings provide strong evidence of abnormal price andabnormal trading activity on the IMS publications date. Our results also clearly indicate that this price activity is highly predictive of impending annual earnings changes. These findings are inconsistent with the argument that IMSs

are unlikely to contain value-relevant information and are unlikely to be informative of future firm fundamentals.

While the empirical evidence in the present paper ispredominately concerned with the information content hypothesis, we believe that it also provides some preliminary evidence whichappears to question the other two key arguments in favour of voluntary quarterly reporting, namely that a switch to a voluntary regime is likely to provide cost savings and that a switch is likely to reduce the pressure on managers to act in a myopic way. For example, we notedthat interim management statements are often quite short and typically contain information which is not too costly to collect. Also, the argument that high frequency reporting leads to short-termism as it encourages managers to issue regular profit targets which they then try to meetthrough value-destroying real activity management is notentirely convincing, either.For a start there is nothing in the Directive that requires interim management statements to contain a profit forecast:All that is needed to comply with the rules is a simple narrative explanation of past trends and events. And our manual content analysis confirms that indeed very few UK firms issued quantitative sales and earnings forecasts in 2009 and 2010. But without such forecasts the short-termism argument is not plausible.

We hope that the evidence in the present paper will lead to a period of reflection in the EU. In particular, we hope that our evidence will persuade the EU of the need to collect further evidence before a final decision is made about the interim management statement. For example, we would like to see our market reaction tests being replicated in other EU countries so as to better understand whether our result can be generalised beyond the UK capital market. Many European Business Schools now have the capabilities to carry out such market reaction tests. Thus, collecting additional evidence from other EU capital markets would provide an excellent opportunity to increase the relevance of University research to policy-makers.

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Table 1. Sample selection.

The table documents our sample selection strategy. The starting point is the FTSE All Share Index in 2009 and 2010. Subsequently, we delete observations due to (a) missing firms on DataStream, (b) the unavailability of IMS release dates on PI Navigator, or (c) the Transparency Directive exempting firms from publishing an IMS if the firm publishes a full quarterly financial report instead. This leads to a final sample of 1099 IMSs in 2009 and 1102 IMSs in 2010. We also reportthe number of return and volume data missing on DataStream. IMS1: interim management statement issued during the first six-month period of the financial year. IMS2: interim management statement issued during the second six-month period of the financial year. Q1: first quarter. Q3: third quarter.We allocate a financial year to the calendar year in which the majority of months falls. Financial years with a June year-end are allocated to the calendar year in which the year-end falls.

		2009		2010	ALL
Total Firms in FTSE All Share Index on 30 June		615		614	1229
Firms with Matching Code in DataStream		605		609	1214
– IMS1 Dates Not Available in PI Navigator	15		15		
– Q1 Full Quarterly Financial Reports	38		38		
= IMS1 Dates Available		552		556	1108
– IMS2 Dates Not Available in PINavigator	22		25		
– Q3 Full Quarterly Financial Reports	36		38		
= IMS2 Dates Available		547		546	1093
= Total IMS1and IMS2 DatesAvailable		1099		1102	2201
– Total IMS1 and IMS2 One-Day Returns Not Available	6		8		
= Total IMS1 and IMS2 One-Day Returns Available		1093		1094	2187
– Total IMS1 and IMS2 One-Day Trading Volumes Not Available	13		21		
= Total IMS1 and IMS2 One-Day Trading Volumes Available		1086		1081	2167

Table 2. IMS content analysis.

The table reports the percentages of IMSs that provide information about financial performance, financial position, and material events and transactions.In analysing financial performance we separately record sales, earnings, and any other information. We also record whether the performance indicator (a) is backward-looking or forward-looking, (b) relates to the group (rather than a segment), and (c) is quantitative in nature. In terms of financial position we differentiate between general statements and specific references to individual assets and liabilities. We define material events and transaction in line with Deloitte & Touche (2007, 2008) as any information about share-buy backs, acquisitions of operations or assets, new or extended loan facilities, asset sales, lease acquisitions, and court cases.Percentages relate to a random sample of 20 non-financial firms from the FTSE 100, the FTSE 250, and the FTSE Small Capitalisation Index. Any randomly selected firm must have a complete set of four IMSs over the period 2009 to 2010.

	ALL	FTSE 100	FTSE 250	FTSE SMALL CAP
FINANCIAL PERFORMANCE				
Sales –backward-looking:up to publication date	90%	93%	96%	80%
Group	75%	76%	86%	63%
Quantitative	68%	78%	78%	50%
Sales – forward-looking:beyond publication date	25%	23%	24%	28%
Group	18%	12%	23%	20%
Quantitative	4%	10%	3%	0%
Earnings – backward-looking:up to publication date	45%	54%	41%	41%
Group	37%	49%	31%	31%
Quantitative	20%	30%	18%	13%
Earnings – forward-looking:beyond publication date	32%	29%	35%	31%
Group	26%	24%	30%	25%
Quantitative	4%	4%	5%	3%
Other – backward-looking:up to publication date	87%	91%	86%	83%
Group	75%	76%	80%	69%
Quantitative	47%	60%	55%	25%
Other – forward-looking:beyond publication date	83%	79%	93%	79%
Group	76%	66%	88%	74%
Quantitative	15%	28%	16%	1%
FINANCIAL POSITION				
General Statement	83%	76%	94%	78%
Individual Assets	63%	65%	71%	51%
Individual Liabilities	58%	63%	68%	45%
MATERIAL EVENTS AND TRANSACTIONS	54%	64%	55%	43%
LENGTH				
Sentences				
Mean	25	35	26	14
Median	21	35	22	12
Words				
Mean	927	1200	1018	563
Median	757	1067	918	489
OBS	240	80	80	80

Table 3. Descriptive statistics: returns and trading volumes around the IMS release date.

The table reports absolute daily raw returns (in %) and daily trading volumes (in %) for the eleven day window around the IMS publication day *t*. Raw returns are calculated from DataStream Return Indices and are inclusive of dividends. Trading volumes are divided by shares outstanding. Separate results are reported for financial and non-financial firms. The total number of observations under day *t*andALL of 1266 + 921 = 2187 (Panels A and B) and 1260 + 907 = 2167 (Panels C and D) is the same as that reported under ALL in Table 1.IMS1: interim management statement issued during the first six-month period of the financial year. IMS2: interim management statement issued during the second six-month period of the financial year. OBS: observations.

		t–5	*t*–4	*t*–3	*t*–2	*t*–1	*t*	*t*+1	*t*+2	*t*+3	*t*+4	*t*+5
PANEL A: IMS1 &IMS2 – NONFINANCIALS – ABSOLUTE RAW RETURNS												
ALL	MEAN	1.9	2.0	1.8	1.9	2.0	3.9	2.0	1.8	1.9	1.8	1.9
	MEDIAN	1.3	1.3	1.2	1.3	1.4	2.6	1.4	1.3	1.3	1.2	1.3
	OBS	1266	1266	1266	1266	1266	1266	1266	1266	1266	1266	1266
2009	MEAN	2.0	2.3	2.1	2.2	2.2	4.3	2.2	2.0	2.1	1.9	2.2
	MEDIAN	1.4	1.5	1.4	1.5	1.5	2.9	1.5	1.4	1.4	1.3	1.4
	OBS	633	633	633	633	633	633	633	633	633	633	633
2010	MEAN	1.7	1.7	1.6	1.7	1.7	3.6	1.8	1.6	1.7	1.6	1.7
	MEDIAN	1.2	1.1	1.1	1.1	1.3	2.2	1.3	1.2	1.1	1.1	1.2
	OBS	633	633	633	633	633	633	633	633	633	633	633
PANEL B: IMS1 &IMS2 – FINANCIALS – ABSOLUTE RAW RETURNS												
ALL	MEAN	1.6	1.4	1.5	1.4	1.5	1.9	1.4	1.4	1.4	1.5	1.4
	MEDIAN	0.9	0.9	1.0	0.9	0.9	1.0	0.9	0.9	0.9	1.0	0.9
	OBS	921	921	921	921	921	921	921	921	921	921	921
2009	MEAN	1.9	1.7	1.7	1.8	1.7	2.4	1.7	1.7	1.7	1.7	1.6
	MEDIAN	1.2	1.1	1.2	1.3	1.0	1.4	1.1	1.1	1.1	1.2	1.0
	OBS	460	460	460	460	460	460	460	460	460	460	460
2010	MEAN	1.2	1.1	1.2	1.1	1.2	1.3	1.2	1.2	1.2	1.2	1.2
	MEDIAN	0.8	0.8	0.8	0.7	0.8	0.9	0.8	0.8	0.8	0.9	0.8
	OBS	461	461	461	461	461	461	461	461	461	461	461
PANEL C: IMS1 &IMS2 – NONFINANCIALS – TRADING VOLUMES												
ALL	MEAN	0.32	0.32	0.36	0.32	0.32	0.67	0.42	0.34	0.32	0.30	0.30
	MEDIAN	0.20	0.20	0.19	0.20	0.22	0.38	0.27	0.22	0.21	0.21	0.20
	OBS	1238	1227	1208	1217	1245	1260	1239	1222	1240	1218	1241
2009	MEAN	0.33	0.36	0.43	0.34	0.35	0.70	0.45	0.39	0.37	0.34	0.33
	MEDIAN	0.23	0.22	0.20	0.22	0.25	0.42	0.29	0.25	0.24	0.24	0.23
	OBS	620	610	598	607	622	632	619	614	619	601	619
2010	MEAN	0.30	0.29	0.30	0.29	0.28	0.63	0.38	0.30	0.28	0.27	0.28
	MEDIAN	0.17	0.18	0.17	0.18	0.19	0.34	0.24	0.20	0.20	0.19	0.18
	OBS	618	617	610	610	623	628	620	608	621	617	622
PANEL D: IMS1 &IMS2 –FINANCIALS – TRADING VOLUMES												
ALL	MEAN	0.16	0.15	0.15	0.14	0.15	0.24	0.18	0.20	0.15	0.17	0.16
	MEDIAN	0.08	0.09	0.08	0.08	0.08	0.09	0.08	0.09	0.08	0.08	0.08
	OBS	888	874	885	891	888	907	898	896	886	872	881
2009	MEAN	0.19	0.17	0.16	0.17	0.16	0.29	0.22	0.23	0.17	0.21	0.18
	MEDIAN	0.09	0.09	0.09	0.09	0.09	0.10	0.09	0.09	0.10	0.09	0.09
	OBS	442	430	436	443	440	454	445	445	440	425	434
2010	MEAN	0.13	0.13	0.14	0.12	0.13	0.18	0.14	0.16	0.14	0.13	0.13
	MEDIAN	0.08	0.08	0.07	0.08	0.08	0.09	0.08	0.09	0.07	0.07	0.07
	OBS	446	444	449	448	448	453	453	451	446	447	447

Table 4.IMS abnormal returns and trading volumes.

The table reports formal tests of H1. Separate tests are reported for (a) abnormal absolute returns and abnormal trading volumes, (b) IMS1 and IMS2, and (c) financial and non-financial firms. IMS publication day abnormal absolute returns (in %) andIMS publication day abnormal trading volumes (in %) are reported under DIFF and the associated p-values are calculated from a one-sample (matched-pair) t-test for means and a Wilcoxon signed rank test for medians. The ratio between absolute IMS publication day returns and absolute normal returns and between IMS publication day trading volume and normal trading volume is reported under RATIO. IMS1: interim management statement issued during the first six-month period of the financial year. IMS2: interim management statement issued during the second six-month period of the financial year. OBS: observations.

		IMS1			IMS2		
		DIFF	P-VALUE	RATIO	DIFF	P-VALUE	RATIO
PANEL A: NONFINANCIALS – ABSOLUTE RETURNS							
ALL	MEAN	2.6	0.000	3.2	2.6	0.000	3.2
	MEDIAN	1.2	0.000	1.9	1.5	0.000	2.4
	OBS	637	637	635	629	629	628
2009	MEAN	2.8	0.000	2.6	2.8	0.000	3.2
	MEDIAN	1.5	0.000	1.9	1.7	0.000	2.4
	OBS	318	318	318	315	315	315
2010	MEAN	2.5	0.000	3.7	2.4	0.000	3.2
	MEDIAN	1.0	0.000	2.0	1.4	0.000	2.4
	OBS	319	319	317	314	314	313
PANEL B: FINANCIALS – ABSOLUTE RETURNS							
ALL	MEAN	1.0	0.000	1.7	0.7	0.000	1.6
	MEDIAN	0.3	0.000	1.3	0.1	0.000	1.1
	OBS	465	465	464	456	456	454
2009	MEAN	1.3	0.000	1.8	0.9	0.000	1.7
	MEDIAN	0.4	0.000	1.4	0.1	0.000	1.1
	OBS	231	231	230	229	229	228
2010	MEAN	0.6	0.000	1.6	0.4	0.000	1.5
	MEDIAN	0.2	0.000	1.2	0.0	0.000	1.1
	OBS	234	234	234	227	227	226
PANEL C: NONFINANCIALS – TRADING VOLUME							
ALL	MEAN	0.46	0.000	4.5	0.45	0.000	4.9
	MEDIAN	0.16	0.000	1.9	0.18	0.000	2.3
	OBS	629	629	629	625	625	625
2009	MEAN	0.40	0.000	3.6	0.51	0.000	5.7
	MEDIAN	0.18	0.000	1.8	0.19	0.000	2.2
	OBS	314	314	314	315	315	315
2010	MEAN	0.51	0.000	5.4	0.38	0.000	4.0
	MEDIAN	0.15	0.000	2.1	0.17	0.000	2.3
	OBS	315	315	315	310	310	310
PANEL D: FINANCIALS – TRADING VOLUME							
ALL	MEAN	0.13	0.000	2.3	0.12	0.000	2.7
	MEDIAN	0.01	0.000	1.1	0.02	0.000	1.2
	OBS	457	457	457	441	441	441
2009	MEAN	0.17	0.006	2.8	0.15	0.000	3.2
	MEDIAN	0.01	0.000	1.2	0.02	0.000	1.2
	OBS	227	227	227	222	222	222
2010	MEAN	0.09	0.000	1.8	0.08	0.000	2.2
	MEDIAN	0.01	0.000	1.1	0.01	0.000	1.2
	OBS	230	230	230	219	219	219

Table 5a. Absolute IMS returns: further tests.

The table uses returns associated with preliminary earnings announcements and half-yearly result announcements as an alternative benchmark and compares one-day IMS raw returns against one-day preliminary earnings announcement raw returns (Panels A and B) and against one-day half-yearly result announcement raw returns (Panels C and D). Mean and median differences(in %) and mean and median ratiosbetween absolute IMS returns and absolute preliminary earnings and half-yearly result announcement returns are reported under DIFF and RATIO, respectively.P-values associated with DIFF are calculated from a one-sample (matched-pair) *t*-test for means and a Wilcoxon signed rank test for medians.Separate tests are reported for (a) IMS1 and IMS2, and (b) financial and non-financial firms. All announcement publications dates are collected from PI Navigator. IMS1: interim management statement issued during the first six-month period of the financial year. IMS2: interim management statement issued during the second six-month period of the financial year. OBS: observations.

		IMS1			IMS2		
		DIFF	P-VALUE	RATIO	DIFF	P-VALUE	RATIO
PANEL A: NONFINANCIALS – IMS VERSUSPRELIMINARY EARNINGS ANNOUNCEMENT							
ALL	MEAN	–0.2	0.406	3.3	–0.5	0.090	3.0
	MEDIAN	–0.5	0.042	0.8	–0.3	0.023	0.8
	OBS	615	615	601	617	617	605
2009	MEAN	0.2	0.696	4.0	–0.2	0.704	3.0
	MEDIAN	0.2	0.251	1.0	0.0	0.842	1.0
	OBS	312	312	306	312	312	306
2010	MEAN	–0.7	0.038	2.6	–0.8	0.009	3.0
	MEDIAN	–0.8	0.000	0.7	–0.6	0.001	0.7
	OBS	303	303	295	305	305	299
PANEL B: FINANCIALS – IMS VERSUS PRELIMINARY EARNINGS ANNOUNCEMENT							
ALL	MEAN	0.4	0.013	3.0	–0.2	0.306	2.1
	MEDIAN	0.3	0.000	1.3	–0.1	0.190	0.8
	OBS	458	458	430	450	450	421
2009	MEAN	0.8	0.002	3.5	0.0	0.891	2.1
	MEDIAN	0.6	0.000	1.7	–0.1	0.679	0.8
	OBS	230	230	218	228	228	216
2010	MEAN	–0.1	0.745	2.5	–0.4	0.020	2.1
	MEDIAN	0.1	0.601	1.0	–0.1	0.136	0.8
	OBS	228	228	212	222	222	205
PANEL C: NONFINANCIALS – IMS VERSUSHALF-YEARLY RESULTANNOUNCEMENT							
ALL	MEAN	–0.8	0.001	2.4	–1.0	0.000	2.7
	MEDIAN	–0.8	0.000	0.7	–0.6	0.000	0.7
	OBS	632	632	617	627	627	612
2009	MEAN	–1.2	0.000	2.1	–1.6	0.000	3.0
	MEDIAN	–1.0	0.000	0.7	–1.1	0.000	0.7
	OBS	317	317	312	314	314	309
2010	MEAN	–0.4	0.279	2.7	–0.4	0.085	2.3
	MEDIAN	–0.5	0.004	0.7	–0.3	0.017	0.7
	OBS	315	315	305	313	313	303
PANEL D: FINANCIALS – IMS VERSUSHALF-YEARLY RESULTANNOUNCEMENT							
ALL	MEAN	0.0	0.866	2.6	–0.6	0.000	1.7
	MEDIAN	0.1	0.187	1.0	–0.2	0.000	0.7
	OBS	464	464	430	456	456	424
2009	MEAN	0.4	0.019	3.2	–0.4	0.090	1.9
	MEDIAN	0.4	0.002	1.2	–0.1	0.106	0.8
	OBS	231	231	212	229	229	212
2010	MEAN	–0.5	0.017	1.9	–0.8	0.000	1.4
	MEDIAN	0.0	0.127	0.9	–0.3	0.000	0.6
	OBS	233	233	218	227	227	212

Table 5b.IMS trading volumes: further tests.

The table uses trading volumes associated with preliminary earnings announcements and half-yearly result announcements as an alternative benchmark and compares one-day IMS trading volumes against one-day preliminary earnings announcement trading volumes (Panels A and B) and against one-day half-yearly result announcement trading volumes (Panels C and D). Mean and median differences (in %) and mean and median ratios between IMS trading volumes and preliminary earnings and half-yearly result announcement trading volumes are reported under DIFF and RATIO, respectively. P-values associated with DIFF are calculated from a one-sample (matched-pair) *t*-test for means and a Wilcoxon signed rank test for medians. Separate tests are reported for (a) IMS1 and IMS2, and (b) financial and non-financial firms. All announcement publications dates are collected from PI Navigator. IMS1: interim management statement issued during the first six-month period of the financial year. IMS2: interim management statement issued during the second six-month period of the financial year. OBS: observations.

		IMS1			IMS2		
		DIFF	P-VALUE	RATIO	DIFF	P-VALUE	RATIO
PANEL A: NONFINANCIALS – IMS VERSUS PRELIMINARY EARNINGS ANNOUNCEMENT							
ALL	MEAN	–0.14	0.118	3.2	–0.16	0.070	2.3
	MEDIAN	–0.04	0.001	0.9	–0.04	0.000	0.8
	OBS	608	608	608	613	613	613
2009	MEAN	–0.29	0.043	1.7	–0.22	0.168	2.6
	MEDIAN	–0.04	0.009	0.8	–0.04	0.027	0.8
	OBS	311	311	311	312	312	312
2010	MEAN	0.03	0.723	4.7	–0.09	0.091	2.0
	MEDIAN	–0.04	0.024	0.9	–0.04	0.001	0.8
	OBS	297	297	297	301	301	301
PANEL B: FINANCIALS – IMS VERSUS PRELIMINARY EARNINGS ANNOUNCEMENT							
ALL	MEAN	0.04	0.222	2.3	0.01	0.681	3.0
	MEDIAN	0.00	0.637	1.0	–0.01	0.092	0.9
	OBS	449	449	449	436	436	436
2009	MEAN	0.07	0.240	2.9	0.03	0.416	3.8
	MEDIAN	0.00	0.829	1.0	–0.01	0.514	0.9
	OBS	226	226	226	222	222	222
2010	MEAN	0.01	0.737	1.7	–0.01	0.468	2.1
	MEDIAN	0.00	0.377	1.0	–0.01	0.080	0.9
	OBS	223	223	223	214	214	214
PANEL C: NONFINANCIALS – IMS VERSUS HALF-YEARLY RESULTANNOUNCEMENT							
ALL	MEAN	–0.06	0.259	2.4	–0.08	0.077	2.4
	MEDIAN	–0.04	0.000	0.8	–0.03	0.000	0.9
	OBS	628	628	628	625	625	625
2009	MEAN	–0.12	0.050	1.9	–0.06	0.482	2.6
	MEDIAN	–0.06	0.002	0.8	–0.06	0.001	0.8
	OBS	316	316	316	314	314	314
2010	MEAN	0.00	0.973	3.0	–0.11	0.028	2.2
	MEDIAN	–0.03	0.041	0.9	–0.01	0.042	0.9
	OBS	312	312	312	311	311	311
PANEL D: FINANCIALS – IMS VERSUS HALF-YEARLY RESULTANNOUNCEMENT							
ALL	MEAN	–0.01	0.822	1.8	–0.04	0.117	3.0
	MEDIAN	–0.01	0.029	0.9	–0.01	0.010	0.9
	OBS	451	451	450	440	440	439
2009	MEAN	0.02	0.722	1.6	–0.02	0.548	2.9
	MEDIAN	–0.01	0.047	0.9	–0.01	0.190	0.9
	OBS	223	223	222	221	221	220
2010	MEAN	–0.04	0.349	2.0	–0.06	0.099	3.0
	MEDIAN	0.00	0.265	0.9	–0.02	0.017	0.8
	OBS	228	228	228	219	219	219

Table 6. The predictive ability of IMS returns for operating profit.

$$\Delta OP_t = \beta_0+\beta_1 DYYEAR_t+ \beta_2\Delta OP_{t-1}+ \beta_3 EP_{t-1}+ \beta_4 BTM_{t-1}+ \beta_5 AG_t+ \beta_6 AG_{t-1}+ \beta_7 RET_t +\beta_8 IMSONE_t+ \beta_9 HALFYEAR_t+ \beta_{10} IMSTWO_t+ \beta_{11} PE_t+\varepsilon_t.$$

The table presents OLS and MEDIAN regression coefficient estimates and associated p-values for a 'reverse' regression of deflated change in pre-exceptional operating profit, ΔOP_t, on one-day IMS1 and one-day IMS2 raw returns, $IMSONE_t$ and $IMSTWO_t$, and one-day preliminary earnings and one-day half–year result raw returns, PE_t and $HALFYEAR_t$.The regression includes, as control variables, lagged change in operating profit, ΔOP_{t-1}, lagged earnings yield, EP_{t-1}, lagged book-to-market value of equity, BTM_{t-1}, current and lagged asset growth, AG_t and AG_{t-1}, and financial-year buy-and-hold raw returns, RET_t. Current and lagged change in operating profit, ΔOP_t and ΔOP_{t-1}, are measured as the change in Worldscope item 01250, deflated by start-of-period market value of equity. Lagged earnings yield, EP_{t-1}, and lagged book-to-market value of equity, BTM_{t-1}, are defined as lagged operating profit and start-of-period book value of equity,both deflated by start-of-period market value of equity, where operating profit and book value of equity are measured by Worldscopeitems 01250 and 03501.Current and lagged asset growth, AG_t and AG_{t-1}, are current and lagged percentage change in total assets, as measured by Worldscope item 02999. $DYYEAR_t$ is a dummy variable for 2010. All return variables are calculated via DataStream's return index and are inclusive of dividends. Median regression parameter estimates and associated p-values are estimated via the 'quantreg' procedure in SAS. P-values in OLS regressions are calculated from heteroskedasticity-consistent t-statistics. IMS1: interim management statement issued during the first six-month period of the financial year. IMS2: interim management statement issued during the second six-month period of the financial year. EXP: predicted coefficient sign. COEF: coefficient estimate. OBS: observations.

		MEDIAN		OLS		MEDIAN		OLS	
	EXP	COEF	P-VALUE	COEF	P-VALUE	COEF	P-VALUE	COEF	P-VALUE
INTERCEPT	(?)	–0.002	0.447	–0.015	0.003	0.017	0.034	0.014	0.555
$DYYEAR_t$	(+)	0.020	0.000	0.087	0.000	–0.003	0.721	–0.051	0.065
ΔOP_{t-1}	(?)					0.078	0.323	0.018	0.930
EP_{t-1}	(–)					–0.206	0.001	–0.280	0.056
BTM_{t-1}	(–)					0.016	0.045	0.050	0.092
AG_t	(+)					0.015	0.308	0.023	0.796
AG_{t-1}	(+)					0.010	0.418	0.005	0.747
RET_t	(+)					0.057	0.000	0.148	0.001
$IMSONE_t$	(+)	0.158	0.019	0.446	0.001	0.152	0.006	0.303	0.006
$HALFYEAR_t$	(+)	0.008	0.840	–0.027	0.815	0.019	0.693	–0.011	0.917
$IMSTWO_t$	(+)	0.094	0.018	0.303	0.049	0.077	0.084	0.044	0.606
PE_t	(+)	0.007	0.904	0.064	0.384	0.078	0.059	0.079	0.279
ADJ R2				0.039				0.412	
OBS		585		585		569		569	

Table 7.IMS Information Content and Firm Size.

$$IMS_t^{ABSRET} = \beta_0 + \beta_1 DYFIN_t + \beta_2 DY100_t + \beta_3 DYSMALL_t + \varepsilon_t$$
$$IMS_t^{VOL} = \beta_0 + \beta_1 DYFIN_t + \beta_2 DY100_t + \beta_3 DYSMALL_t + \varepsilon_t$$

The table presents OLS and MEDIAN regression coefficient estimates and associated p-values for a regression ofone-day absolute IMS returns, IMS_t^{ABSRET}, and one-day IMS trading volumes,IMS_t^{VOL}, on two size dummy variables, one for FTSE 100 companies, $DY100_t$, and one for small capitalisation companies, $DYSMALL_t$. The regression also includes, as a control, a dummy variable for financial firms, $DYFIN_t$. Dummy variablesare defined via the FTSE All Share Index lists as per 30 June 2009 and 30 June 2010.Median regression parameter estimates and associated p-values are estimated via the 'quantreg' procedure in SAS. P-values in OLS regressions are calculated from heteroskedasticity-consistent t-statistics. Predicted coefficient signs for $DY100_t$ and $DYSMALL_t$ are those implied by responses to the 2010 EU consultation process.EXP: predicted coefficient sign. COEF: coefficient estimate. OBS: observations.

		ABSOLUTE RETURNREGRESSION				TRADING VOLUME REGRESSION			
		MEDIAN		OLS		MEDIAN		OLS	
	EXP	COEF	P-VALUE	COEF	P-VALUE	COEF	P-VALUE	COEF	P-VALUE
INTERCEPT	(+)	0.026	0.000	0.039	0.000	0.004	0.000	0.007	0.000
$DYFIN_t$	(–)	–0.015	0.000	–0.022	0.000	–0.002	0.000	–0.004	0.000
$DY100_t$	(+)	0.000	0.963	–0.005	0.021	0.002	0.000	0.001	0.025
$DYSMALL_t$	(–)	0.000	0.917	0.004	0.064	–0.001	0.000	–0.002	0.000
ADJ R2				0.067				0.060	
OBS		2187		2187		2167		2167	

[1] Our source for trading volumes, DataStream, does not indicate whether daily trading volumes are predominately buyer-initiated or predominately seller-initiated. Thus, as far as the trading volume is concerned we cannot differentiate between good news and bad news and we cannot test whether good and bad news is associated, on average, with positive or negative changes in operating profit. For this reason, we do not employ trading volumes in the second part of the paper. Note that H1 abstracts from the sign of the event-period news but this is entirely consistent with the previous information content literature (which we review in Section 5).

[2] At a pilot study stage we found that only 83% of firms with an accounting period beginning after 20th January 2007 published an IMS in the first six-month period of their 2007/08 financial year. This increased to 92% for their second IMS in 2007/08 and never dropped below 96% in subsequent years. Furthermore, Deloitte & Touche (2007, 2008) report low initial compliance rates in relation to content requirements. Finally, one would expect the way a trading statement is unambiguously identified in its news heading (and main text) as an 'IMS' to increase over time.

[3] These three indices represent the largest 100 listed firms in the economy, the next 250 listed firms by market capitalisation, and listed small capitalisation firms.

[4] In particular, we follow Schleicher (2012) in recording, for each performance indicator, only the highest-ranked statement in Table 2.For example, if a firm discloses a sales statement for the group as a whole and for one or more of its segments, then only the group statement is recorded.

[5] Strictly speaking, our trading variable is a share turnover variable, not a volume variable. Nonetheless, we follow the prior information content literature and use the term 'volume' instead of 'turnover'.

[6]Note that Beaver (1968) abstracts from the sign of the report period return/news by squaring returns, not by transforming returns in absolute values. Beaver (1968) then divides squared report period returns by the variance of returns in the non-report period and tests this metric against a threshold value of 1. Our test differs from Beaver (1968) in that we abstract from the sign of the return by taking absolute values. We prefer this transformation over squaring as squaring reinforces outliers. For the same reason we also base our formal test of H1 on the difference, DIFF, between report period values and non-report period values, and not on the ratio between the two, as unusually low denominators can easily lead to an 'explosion' of the ratio value. However, we report the ratio, in subsequent tables, as an additional descriptive statistics, both for returns and trading volumes.

[7] It is also consistent with our identification of IMS release dates being accurate. This is perhaps unsurprising given that FTSE All Share Index firms, like all EU regulated firms, now publish an 'annual information update' which lists, in chronological order, all news announcements throughout the previous twelve months (and which we used to identify IMS release dates). The typical UK practice of releasing news announcements at 7 am in the morning, immediately before the start of trading, might also contribute to an instantaneous, same-day reaction as it gives the market a full trading day to read and digest the news.

[8] Remember that, strictly speaking, the evidence in Table 2 only applies to non-financial firms.

[9] In Tables 5a and 5b we report under RATIO the mean and the median ratio between IMS returns/volumes and preliminary earnings announcement returns/volumes and between IMS returns/volumes and half-yearly results returns/volumes. However we notice that the ratio means are frequently affected by extreme values. The reason for that is that the ratio's denominator is no longer calculated as the median of 200 trading day observations, as in Table 4, and this increases the frequency of extreme observations in the denominator.

[10] In untabulated regressions we also estimated a restricted and an unrestricted model with only one one-day announcement return at a time, rather than all four one-day announcement returns, as in Table 6. The regression coefficients on $IMSONE_t$, $HALFYEAR_t$, $IMSTWO_t$, and PE_t in these untabulated regressions and their associated p-values are qualitatively similar to those reported for β_8 to β_{11} in Table 6 below.

[11] In the unrestricted regression the mean and median values of ΔOP_t, $DYYEAR_t$, ΔOP_{t-1},EP_{t-1}, BTM_{t-1}, AG_t, AG_{t-1}, RET_t, $IMSONE_t$,$HALFYEAR_t$, $IMSTWO_t$, and PE_t are 0.022, 0.499, 0.000, 0.162, 0.901, 0.022, 0.106, 0.226, –0.001, 0.012, –0.004, 0.004 and 0.008, 0.000, 0.006, 0.129, 0.552, 0.011, 0.036, 0.085, 0.000, 0.005, 0.000, 0.001.

[12] For example, it is possible that IMS returns are predominately a 'reward' or 'penalty' for good and bad news about current and future trading, while preliminary earnings announcement returns are predominately a 'reward' or 'penalty' for 'meeting' or 'not meeting' previously announced trading conditions.

[13] This result holds even if we deflate the number of shares traded on day *t* by the number of free-floating shares rather than the number of shares outstanding.

[14] That the price movement to the release of financial information is largest for the smallest firms in the economy is a result that has long been established in the information content literature. See, for example, Grant (1980). The usual explanation is that small firms release fewer news statements throughout the financial year and/or are less well researched by investors and analysts and hence have a smaller proportion of their financial result anticipated by the market.