“Does industrial financial analysis affect stock returns? International empirical evidence”

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Does industrial financial analysis affect stock returns? International empirical evidence

Abstract

The present study examines empirically the role of industrial financial information in explaining security returns in three major capital markets: UK, USA and France. It is hypothesized that the homogeneity across firms may not hold, due to industry specific differences across firms. The dataset consists of more than 40,000 USA, UK and French firm-year observations over a nine year period. Multivariate statistical regression analysis is undertaken to test the major research hypotheses. Results indicate that both earnings and cash flows are taken into consideration by investors in their investment decisions and that the industry the firm belongs to plays an important role in security analysis. More specifically, results indicate that in all industries, the French model has the highest explanatory power as measured by the R-square. This result is mostly made due to the increased importance of earnings to investors in France. Also, as expected, results indicate that the cash flow information is more useful to UK and USA investors than to French investors in all industries examined, and more importantly in the manufacturing and retail industries, where more discretion and manipulation exists in their financial reporting systems.

Keywords: capital markets, earnings, cash flows, international, empirical.
JEL Classification: G14, G15, G30.

Introduction

The valuation of earnings in the capital markets has been among the primary questions raised in various empirical studies in the past few decades. The usefulness of earnings has also been examined recently in combination with operating cash flows (Bali et al., 2009; Banker et al., 2009; Bartov et al., 2001; Charitou et al., 2001; Ball et al., 2000, among others). Empirical studies showed that earnings are more useful than cash flows in the capital markets. Evidence on the valuation of cash flows beyond earnings has been inconclusive. Moreover, comparative international research on the valuation of cash flows has been limited. Researchers also contend that when aggregate data is used, it is assumed that the relationship between earnings and cash flows with stock prices is uniform across firms. This assumption that investors react similarly to earnings and cash flows of all firms is not convincing.

The present study hypothesizes that the uniformity across firms may not hold, due to industry-specific differences across firms. It is hypothesized that the association of operating cash flows and earnings with security returns is affected by the industry and the country the organization belongs to. This argument has been made in several prior studies that examined the role of accruals in earnings management studies. For example, various researchers, among those, Kothari et al. (2005), Teoh et al. (1998) examined the role of accruals in different industries for a sample of US firms. These researchers showed that there exist differences in accruals among industries.

We argue that industries have different financial characteristics. Manufacturing firms, for example, are more capital intensive compared to retail and service organizations. Capital intensiveness may lead to greater need for cash flows for reinvestment purposes. Moreover, manufacturing firms have greater depreciation expenses and thus the differences between earnings and cash flows in manufacturing firms may be greater, compared to the retail and service firms. Furthermore, manufacturing and retail firms are expected to maintain higher inventory levels compared to service organizations. This difference in the inventory levels may lead to greater discrepancy between earnings and cash flows in these two industries if there are great variations in inventory levels from year to year. For example, great increases in inventory levels in one year, assuming cash was used to manufacture or acquire this inventory will lead to a reduction in cash flows.

Regression analysis was used to test the major hypotheses. A sample of more than 40,000 USA, UK and French firm-year observations was used to test the research hypotheses. The major conclusions of the empirical results are summarized as follows. First, regarding hypothesis 1, which stated that earnings and cash flows are associated with stock prices in USA, UK and France, results indicate that indeed both earnings and cash flows are taken into consideration by investors in their investment decisions. Second, regarding hypothesis 2, which stated that earnings and cash flows are industry specific, results indicate that consistent with our hypothesis and our expectations, the statistical results indicate that earnings and cash flow information is industry specific, that is investors and financial analysts pay different attention to earnings and cash flows depending on

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the industry they analyze. Specifically, investors value more the earnings in the service industry, partly because in that industry the manipulation of earnings is the least because there exist the least accruals (i.e., depreciation, amortization, inventories, etc). As far as the cash flow information is concerned, results indicate that investors value cash flow more in the manufacturing industry.

In summary, evidence provided in this study supports that indeed there are substantial differences in the way investors and financial analysts perceive financial information such as earnings and cash flows in UK, France and USA.

1. Financial reporting in France, the UK and the USA

The three countries to be examined in the present study are the UK, the USA and France. The UK was selected because there is a controversy in the UK financial reporting literature regarding the value relevance of earnings and cash flows. UK studies provided inconclusive results in the past regarding the information content of earnings and cash flows. As far as the USA is concerned, it was selected to be used as a benchmark because the majority of research undertaken thus far examined US firms. However, USA studies examined only certain issues that relate to the value relevance of earnings and cash flows and the present study is expected to provide a comprehensive analysis regarding the value relevance of financial information. As to France, this country was selected because, contrary to the common law system followed in the UK and the USA, the French financial reporting system is based on code law. Preliminary evidence in the literature, indicates that the value relevance of earnings and cash flows depends on whether the examined firms are under a common law or under a code law system (Charitou and Vlittis, 2010). Thus, studies have not examined empirically these issues in various industries at an international setting.

Since the main purpose of this study is to provide evidence regarding the value relevance of operating earnings and cash flows in the US, UK and French capital markets, it is important to take into consideration the financial reporting differences between theses countries and determine how they may affect the value relevance of earnings and cash flows. Evidence shows that the financial reporting requirements and the accounting standards and practices that are used in these countries differ. Evidence shows that there are significant financial reporting differences between these countries despite the efforts to be minimised through the adoption of the International accounting standards. Financial reporting in the UK and US has several similarities due to the fact that it is based on the Anglo-Saxon system. On the other hand, the UK and French financial reporting systems have fewer similarities even though both countries follow the EU accounting directives. More specifically, in France firms give the same data sets for financial reporting and tax purposes. Consequently, France is more conservative in the preparation of financial statements and tax rules override accounting rules. This affects the accounting treatment of discretionary items and causes differences between this country and the others that give different reports. A difference that arises between countries that give the same reports for tax purposes and for financial reporting like France and those that are not is that deferred taxation generally does not arise for the first one. In the US and UK deferred taxation exists because the income calculated for tax purposes differs from the income for financial reporting. Another difference is the use of accelerated methods of depreciation in France, which leads to lower income. Main providers of capital in France are the government and banks (Bartov et al., 2001; Charitou and Vlittis, 2010).

A discussion of the financial reporting systems in the three countries (France, the UK, and the USA) that are examined in the present study, follows.

1.1. Financial reporting in France. The development of one practice in France has taken place largely within a political setting of a republic operating as a democracy. The relative freedom of choice in the preparation of group accounts has provided new opportunities for flexibility of practice and opened financial reporting thinking to new concepts and practices. French financial reporting practice is based on a tradition of a code set by law. Tax law has developed separately from accounting law, but has been highly influential on the choice of financial reporting practice within the accounting law. Being a founder member of the EU gave an opportunity for France to influence the financial reporting practice of individual companies, through the Fourth Directive (Weetman et al. 2005; Nobes and Parker, 2004).

Comparing the French financial reporting with the Anglo-Saxon financial reporting, it is observed that the French reporting differs in a number of ways as a result of the approaches taken toward financial reporting standardization and outcomes achieved with the national accounting code. The major objectives of this code are standardization of the organization of the accounting system of the enterprise and standardization of the presentation of financial results and position (Walton et al., 2003; Haskins et al., 2000; Weetman et al., 2005).

Empirical studies classified France as a uniform system where accounting was seen as a means of governmental control. Nobes and Parker (2004) classified the French accounting system as tax based and macro-uniform. Moreover, France was classified with the main body of European countries on the basis of measurement.

The financial reporting in France is characterized by marginal professionalism, strong uniformity, strong conservatism and marginal secrecy. The political and legal institutions provide a basis of statutory control for financial reporting within accounting. As to conservatism evidence shows that the French accounting practice is placed at the most conservative level compared to other countries, especially with regards to the treatment of provisions, long-term contracts, inventories, asset valuation and contingencies and is influenced by the interaction of accounting and tax law (Nobes and Parker, 2004; Walton et al., 2003).

As to the French capital markets, relatively few listed French firms have widely dispersed shareholdings. In the past, French firms have not generally used the stock market as a source of financing, but in recent years there has been an increase in new equity financing. Firm growth and capital gains are the major factors taken into account by French investors in firm valuation. In contrast, French investors have a conservative view of expectations from dividends (Ball et al., 2000; Nobes and Parker, 2004).

1.2. Financial reporting in the UK. Contrary to the financial reporting in France, the financial reporting practice in the UK has a strong tradition of professionalism. Statute law and financial reporting standards set general bounds on requirements but the professional accountant determines the detail of practice. The accounting profession is well established and there is a relatively wide requirement for audit of company accounts. Company law concentrates primarily on protection of shareholders and creditors. Other sources of authority indicate a concern with wider stake-holders. From time to time there have been concerns to ensure that the needs of employees are addressed and that the public interest is taken into account. This depends to some extent on the political views of the government. The current approach to standard setting places particularly strong emphasis on the needs of users, although there is no clear statement of their needs (Nobes and Parker, 2004; Lee et al., 2005).

The financial reporting system in the UK is characterized by strong professionalism, flexibility, optimism and transparency. The accounting profession has a long history of development in the UK. Flexibility has been consistent with this professional approach. Optimism is seen in the use of alternative valuation methods to historical cost accounting. Transparency is seen in the widespread disclosures required of companies in the footnotes to major financial statements (Weetman et al., 2005; Walton et al., 2003).

1.3. Financial reporting in the USA. Similar to the UK financial one, but contrary to the French reporting, the USA financial reporting is based on common law. The accounting principles and practices of the USA are influential.

The source of the widespread influence of USA financial reporting lies in its worldwide economic dominance and in the importance of its capital market. The market is closely regulated and companies which seek a listing of their shares must comply with SEC regulations.

Within this framework of close regulation, there is considerable scope for application of professional judgment in financial reporting matters. Financial reporting standards are greater in volume and more detailed than those of almost any other country in the world, but they are set by an independent standard setting body rather than by statute law. Accounting disclosure is characterized by openness and financial reporting measurement by general conservatism and historical cost. Such conservatism originated in the stock market crash of 1930s, modified by flexibility in response to events of the recent years (Weetman, 2005; Walton et al. 2003; Nobes and Parker, 2004).

Similar to the UK, the USA system is characterized by strong professionalism, flexibility, conservatism and increased transparency. The strong professionalism involves the responsibility taken by the profession for setting financial reporting standards. Flexibility is seen in the lack of prescribed formats of presentation and the separation of tax and accounting law. The reliance on historical cost places the USA in a highly conservative category. Transparency is seen in widespread disclosures required by law for all listed firms (Land and Lang, 2005; Walton et al., 2003).

2. Background and hypotheses development

In the past couple of decades a few studies examined the role of financial information in the capital markets. The first type of studies examined the role of earnings or cash flows in a single country, mainly USA or UK. For example, Dechow (2004), among others, examined the role of earnings and cash flows in the USA. She showed that both earnings and cash flows are valued in the capital markets (Charitou and Clubb, 2000; Chan et al. 2006).

Since the aforementioned researchers hypothesized that the value relevance of financial information is homogeneous across industries and across countries, and since research on the valuation of financial information has been very limited, researchers, among those, Meek and Thomas (2003) urged for more research that takes into account both differences in industries at an international level.

Researchers, among those, Ball et al. (2003), Bartov et al. (2001), and Joos and Lang (1994), among others, examined the role of financial information in international capital markets. Specifically, Ball et al. (2003), Bartov et al. (2001) examined the role of earnings and cash flows in the international capital markets. Results showed that earnings are valued more in the capital markets and that earnings are more valued relevant in common law countries. Joos and Lang (1994) examined the role of financial information in EU countries. Results showed that there are differences in the stock market valuation of financial information in the EU countries. Furthermore, King and Langli (1998), Arce and Mora (2002) examined whether earnings and book value of equity are valued in the marketplace in various European countries. The aforementioned researchers assumed that the coefficients of earnings and book value of equity are constant across industries but differ across countries. Results of these studies showed that earnings and book value of equity are value relevant but that they convey different information to the capital markets and that they are valued more in countries, where financial statements are geared towards the needs of capital markets participants, arguing that any differences in the earnings and book value coefficients is due to accounting policy differences in the countries under investigation.

Prior studies assumed that the value relevance of financial information, e.g., earnings, cash flows and book value of equity, are homogeneous across industries. As far as industry differences are concerned, Ballas and Hevas (2006) examined the role of earnings and book values in various industries in France, Germany, Netherlands, and United Kingdom. Their results indicated that both earnings and book value of equity are value relevant and that there are industry and country specific differences in the valuation multiples. Ballas and Hevas (2006) also argue that in the case where researchers aim to identify differences in the valuation of earnings and book value across countries, constraining the valuation coefficients of earnings components to be the same is even more important because economic conditions facing different European countries are more likely to be reflected at the industry level rather than the macro level.

Moreover, studies on earnings management by Kothari et al. (2005), Teoh et al. (1998), among others, examined the role of accruals in different industries for a sample of US firms. These researchers showed that there exist differences in accruals among industries.

One of the major limitations of the aforementioned studies is that several studies, among those, Dechow (1994), Sloan (1996), Barth, Beaver, Hand, and Landsman (1999), argue that accruals and cash flow earnings components have different implications for forecasting abnormal earnings and for estimating equity market value. Therefore, disaggregating earnings into its accrual and cash flow components assists managers in forecasting earnings and market value of equity. Barth et al. (1999) also argue that the valuation of accrual and cash flow components of earnings vary across industries. Furthermore, Barth et al. (2004) examined the forecasting role of both cash flows and accruals across industries. Results showed that the forecasting ability of those components is different (Arthur et al., 2010).

Even though the aforementioned studies examined the value relevance of earnings in the capital markets they did not examined both earnings and cash flows at an industry level in various countries. Thus, the present study extends prior research in the following respects. First, it examines both the role of earnings and cash flows at an industry level that other studies did not examine. Second, it extends above analysis by combining both industry and country analysis.

Thus, the present study goes a step further to examine whether the value relevance of earnings and cash flows is industry specific in an international setting.

The inconclusive results in prior studies, and the limited research on this issue provide motivation for this study. The research hypotheses to be tested are:

H1: There exists a positive association between operating earnings (cash flows) and security returns in the UK, USA and France.

H2: The value relevance of earnings and cash flows is industry specific.

A discussion on each of the above hypotheses follows.

Hypothesis 1. There exists a positive association between operating earnings (cash flows) and security returns in the UK, USA and France.

Prior studies emphasized the levels of earnings and cash flows, mostly in a specific country. The present study will reexamine both the level and changes of operating earnings and cash flows in order to reconfirm the results of prior studies prior to examining the role of earnings and cash flows in a specific industry in an international setting.

Hypothesis 2. The relative informativeness of the levels and changes of operating earnings and operating cash flows is industry specific.

The inconclusive results of prior studies, the weak explanatory power of prior models, as well as the instability of the earnings and cash flow response coefficients led researchers to a further examination of this issue. This hypothesis predicts that operating earnings and operating cash flows are associated with security returns. Prior empirical studies which examined the usefulness of earnings and cash flows used mainly aggregate data (Bartov et al., 2001; Charitou, 2001; Charitou, 2010; Livnat and Zarowin, 1990; Rayburn, 1986). According to Lev (1989) and Cho and Jung (1991) one of the major problems of all prior studies that examined the association of operating earnings and cash flows with security returns is that they assumed that the earnings and cash flow response coefficients are constant (i.e. identical for all firms regardless of their firm-specific and industry-specific characteristics). Lev supports that the assumption made in prior studies that the response coefficients are constant is unrealistic. This study extends prior studies by examining the contention made by Lev and by other researchers that industry specific earnings and cash flow information play a very important role in the marketplace. More specifically, this study hypothesizes that the relative informativeness of the levels and changes of operating earnings and cash flows is industry specific.

3. Research design

All industrial firms that belong to the manufacturing industry (SIC 100-4299, 4400-4799), retail industry (SIC 5000-5999) and service industry (SIC 7000-8999) of the USA, UK and France over the recent nine year period were selected. Industrial firms that had all the information available for the computation of operating cash flows, operating earnings and security returns were included in the sample, resulting in the following firm-year observations for the recent nine year period: 36695 in the USA, 4234 in the UK and 1181 in France. Consistent with prior empirical studies, observations that were regarded as outliers were excluded from the sample, i.e. observations with absolute change in earnings/market value, absolute change in cash flows/market value, earnings/market value and cash flow/market value greater than 150%. Also observations that were in excess of three absolute studentized residuals were considered outliers and were excluded from the sample. These restrictions resulted in approximate reduction of the sample size of about 2%, which is consistent with prior empirical studies. Therefore, the final sample size used for regression analysis purposes equals to 35872 firm-year observations for the USA sample, 4178 firm-year observations for the UK sample and 1165 firm-year observations for the French sample.

In order to examine whether investors in the UK, USA and France take into consideration in their investment decisions the levels and changes of earnings and cash flows, independent of each other, the following univariate regression model will be used:

$$RET_{it} = b_0 + b_i X_i + e_I, \quad (1)$$

where X_i is replaced by:

E are operating earnings; ΔE is change in operating-earnings; CFO are operating cash flows; ΔCFO is change in operating cash flows; RET_{it} is stock return for firm i measured over a 12-month return interval ending three months after the fiscal-year-end.

In order to test whether both the levels and changes of earnings and cash flows are valued differently in the capital markets, namely in the USA, UK and France, the following multivariate regression model will be used:

$$RET_{it} = b_0 + b_i E + b_2\, \Delta E + b_3\, CFO + b_4\, \Delta CFO + e_i, \quad (2)$$

where E are operating Earnings; ΔE is change in operating-earnings; CFO are operating cash flows; ΔCFO is change in operating cash flows; RET_{it} is stock return for firm i measured over a 12-month return interval ending three months after the fiscal-year-end.

Model 2 includes all four independent variables (both levels and changes of earnings and cash flows). This model tests whether the level and changes of earnings (cash flows) are valued beyond cash flows (earnings) in the marketplace. Prior studies in the USA and in the UK established an association between earnings and security returns, but the results regarding the value relevance of cash flows beyond earnings have been inconclusive. As far as the value relevance of cash flows beyond earnings in France is concerned, there has been no more empirical evidence. If cash flows (earnings) are valued by investors beyond earnings (cash flows) then the coefficients of these variables are expected to be positive and statistically significant.

4. Empirical results

4.1. Regression diagnostics. The research hypotheses discussed earlier are tested in what follows empirically. Table 1 presents basic descriptive statistics

for all the earnings, cash flows and security returns variables examined in the study for all three countries (USA, UK and France) for the recent nine year period. Results indicate the following: a) the mean security return for the UK and the USA is the highest (0.092 and 0.08, respectively), whereas in France is somewhat lower, 0.055; b) the mean earnings level is higher for the UK (0.057) and lowest for the USA (for the French dataset the mean of earnings levels is 0.037); c) the mean of the cash flow levels is shown to be the highest for the French dataset (0.184) and lower for the UK and the USA (0.123 and 0.057, respectively); d) as expected the standard deviation of the levels and changes of cash flows is always higher than the level and changes of earnings in all three countries. These results are consistent with the results provided in prior empirical studies. Moreover, untabulated correlation analysis results indicate that there are no significant correlations that may possibly affect the results.

Table 1. Descriptive statistics for all firms for the USA, the UK and France

Country	Variable	Mean	Median	Lower quartile	Upper quartile
USA	*E*	-0.008	0.038	-0.052	0.077
	ΔE	0.007	0.051	-0.038	0.038
	CFO	0.057	0.078	-0.035	0.142
	ΔCFO	0.009	0.005	-0.059	0.071
	RET	0.08	0.005	-0.285	0.335
UK	*E*	0.057	0.072	0.046	0.098
	ΔE	0.005	0.008	-0.017	0.028
	CFO	0.123	0.107	0.054	0.175
	ΔCFO	0.002	0.007	-0.054	0.069
	RET	0.092	0.073	-0.154	0.305
FRANCE	*E*	0.037	0.058	0.028	0.087
	ΔE	0.008	0.005	-0.019	0.025
	CFO	0.184	0.134	0.058	0.261
	ΔCFO	0.006	0.005	-0.08	0.096
	RET	0.055	0.03	-0.15	0.25

Notes: *E* are operating earnings, **Δ***E* are Changes in earnings, *CFO* are operating cash flows, **Δ***CFO* are changes in operating cash flows, *RET* – annual security returns.

4.2. Regression analysis results. *4.2.1. Univariate and multivariate regression analysis results on the value relevance of earnings and cash flows for the USA, UK and France.* Univariate results presented in Table 2 indicate the following. First, as to the value relevance of earnings, as expected, the results indicate that both the levels and changes in earnings are positive and statistically significant in all three countries. Interestingly, the size of the levels of earnings and the size of the changes in earnings is approximately equal in all three countries, in spite of the fact that the French financial reporting system is much more conservative. Specifically, the coefficients of the level of earnings are 0.759, 0.767 and 0.793 for the USA, the UK, and France, respectively. The coefficients of the changes in earnings are 0.701, 0.612 and 0.669. As far as the R^2 is concerned, results indicate that French earnings (levels and changes) are more value relevant than the earnings in the USA and the UK, even though the financial reporting system in France in more conservative. The R^2 for the level of earnings is 11.20% for France, 8.80% for the UK and 6.70% for the USA. The same ranking applies to the changes in earnings, although the R^2 is somewhat lower, indicating that the level of earnings is more value relevant than the changes in earnings.

Table 2. Univariate regression results for all firms for the USA, the UK and France

Xi	USA	UK	FRANCE
E			
Coefficient	0.759 *	0.767 *	0.793 *
t-statistic	50.864	20.128	12.179
R^2 Adj	6.70%	8.80%	11.20%
ΔE			
Coefficient	0.701 *	0.612 *	0.669 *
t-statistic	45.442	17.205	10.86
R^2 Adj	5.40%	6.60%	9.10%
CFO			
Coefficient	0.447 *	0.451 *	0.197 *
t-statistic	34.617	16.46	5.061
R^2 Adj	3.20%	6.10%	2.10%
ΔCFO			
Coefficient	0.196 *	0.202 *	0.072 **
t-statistic	16.274	8.686	2.09
R^2 Adj	0.70%	1.80%	0.30%

Notes: $RET = a_0 + a_1 X_i$, where X_i is the independent variable *E*, Δ*E*, *CFO*, or Δ*CFO*, where *E* are operating earnings, Δ*E* are changes in earnings, *CFO* are operating cash flows, Δ*CFO* are changes in operating cash flows; *RET* – annual security returns. All independent variables (*E*, Δ*E*, *CFO*, Δ*CFO*) are deflated by the market value of the firm at fiscal year end of the previous year.

As far as the value relevance of cash flows is concerned, as expected, results indicate that cash flows are value relevant in all three countries. All the coefficients of the levels and changes in cash flows are positive and statistically significant. The size of the coefficients of cash flows as well as the magnitude of the R^2 are somewhat higher in the Anglo-Saxon countries, suggesting that cash flows could be less value relevant in France. Moreover, as it was expected the size of the earnings coefficients and the magnitude of the R^2 are relatively higher than the equivalent cash flow statistics. These results are consistent with our hypotheses, expectations and consistent with prior empirical evidence. This is due to the fact that earnings are considered more value relevant in the stock markets.

4.3. Multivariate analysis regression results for testing the relative valuation of earnings and cash flows by industry effects for the USA, the UK and France. Hypothesis 2 predicts that investors in making investment decisions pay different attention to earnings and cash flows, and this depends on the industry. The inconclusive results of previous studies, their weak explanatory power, as well as the instability of the earnings and cash flow coefficients, led researchers and us to a further examination of this issue.

This hypothesis predicts that operating earnings and operating cash flows are associated with security returns, but the relationship is industry specific. Prior empirical studies which examined the usefulness of earnings and cash flows used mainly aggregate data. One of the major problems of previous studies that examined the association of operating earnings and cash flows with stock prices is that researchers assumed that the earnings and cash flow coefficients are the same for all firms regardless of the industry they belong to. However, researchers support that the assumption made in previous studies that investors are not affected by industry factors, may not be realistic. The results that follow extend previous studies by examining the contention made by researchers that earnings and cash flow information is industry specific. More specifically, hypothesis 2 supports that the relative valuation of the levels and changes of operating earnings and cash flows is industry specific.

Table 3 presents results for all years for all three countries for three major industrial sectors. These industrial sectors are: a) manufacturing, b) retail; and c) service. According to the standards and poors, firms are classified by industry taking into consideration a standard industrial classification (SIC) code. Firms with SIC code from 100 to 4999 are classified as manufacturing, firms with SIC code from 5000 to 5999 are classified as retail, and finally, firms with SIC code from 7000 to 8999 are classified as service organizations. Clearly, these type of industries have different financial characteristics. For example, manufacturing firms are more capital intensive compared to retail and service organizations. Capital intensiveness may lead to a greater need for cash flows for reinvestment purposes. Moreover, manufacturing firms have greater depreciation expenses and thus the difference between earnings and cash flows in manufacturing firms may be greater compared to the retail and service firms. Furthermore, manufacturing and retail firms are expected to maintain higher inventory levels compared to service organizations. This difference in the inventory levels may lead to greater differences between earnings and cash flows in these two industries if there are great variations in inventory levels from year to year. For example, great increases in inventory levels in one year, assuming cash was used to manufacture or acquire this inventory, will lead to a reduction in cash flows.

Table 3. Multivariate analysis regression results by industry for all firms for the UK, the USA and France

Model: $RET = a_0 + b_1 E + b_2 \Delta E + b_3 CFO + b_4 \Delta CFO$

COUNTRY	INDUSTRY	Constant	E	ΔE	CFO	ΔCFO			
		a_0	b_1	b_2	b_3	b_4	R^2	Model signif	# of firms
(First line the slope coefficient, second line the t-value)							%		
UK	Manufacturing	0.027	0.39	0.27	0.25	-0.006	11.3	0.00*	2761
		(3.34)*	(6.57)*	(5.38)*	(5.45)*	(-0.17)			
	Retail	0.04	0.63	0.33	0.14	-0.07	12.3	0.00*	886
		(2.59)**	(4.82)*	(2.69)*	(1.83)***	(-1.06)			
	Service	0.09	0.479	0.185	0.165	0.09	8	0.00*	531
		(4.17)*	(2.45)**	-0.98	-1.23	-0.66			
USA	Manufacturing	0.06	0.388	0.554	0.266	-0.176	9.4	0.00*	26168
		(17.9)*	(16.5)*	(25.3)*	(12.2)*	(-9.5)*			
	Retail	0.067	0.512	0.4	0.184	-0.112	8.6	0.00*	5114
		(9.0)*	(10.8)*	(8.2)*	(4.8)*	(-3,2)*			
	Service	0.08	0.452	0.433	0.265	-0.125	7.2	0.00*	4591
		(8.0)*	(7.2)*	(7.6)*	(4.3)*	(-2.3)**			
FRANCE	Manufacturing	0.006	0.498	0.443	0.06	-0.06	14.4	0.00*	860
		-0.42	(6.48)*	(5.90)*	-1.32	(-1.35)			
	Retail	0.02	1.27	0.195	0.167	-0.146	18.5	0.00*	170
		-0.66	(4.7)*	-1.06	-1.34	(-1.31)			
	Service	0.06	1.05	0.89	-0.06	0.11	13,1	0.00*	134
		(1.79)***	(2.27)**	(2.04)**	(-0.32)	-0.52			

Notes: *, **, *** Statistically significant at a = 1%, 5% and 10% respectively; ( ), figures in parentheses represent t-statistic: in the E are operating earnings, ΔE are changes in earnings, CFO are operating cash flows, ΔCFO are changes in operating cash flows, RET – annual security returns. All independent variables (E, ΔE, CFO, ΔCFO) are deflated by the market value of the firm at fiscal year end of the previous year.

Specifically, results in Table 3 indicate the following. First, as hypothesized, the level of earnings variables is statistically significant in all industries in all countries. In all three countries, the earnings coefficient is the highest in the retail industry (0.63, 0.512. and 1.27 for the UK, the USA and France, respectively). As far as the changes in earnings is concerned, results indicate that it is always statistically significant in the manufacturing industry. In the service and retail industry it is not significant in the UK and France, respectively. Second, as far as the role of the cash flows is concerned, results indicate that there exist industry differences that were not observed when the previous hypotheses were tested. Specifically, the level of cash flows seems to be more important to investors in the manufacturing industry. In the Anglo-Saxon countries, the UK and the USA, it is positive and statistically significant (0.25 and 0.266). Results in these Anglo-Saxon countries also indicate that the level of cash flows plays more important role to investors compared to the service industry. These results are consistent with our expectations since firms in the manufacturing industry have much more accruals due to higher levels of property, plant, equipment and inventory. Since these type of firms have much higher accruals, earnings can be manipulated more in these industries and thus investors and analysts pay more attention to cash flows. Furthermore, other possible explanations is that manufacturing firms have on average longer horizon investments than service and retail firms with greater variability and uncertainty in their earnings.

As far as the French results in Table 3 are concerned, they indicate that there is no statistically significant difference among the industries. These results are again consistent with the expectations since in code law countries there is less manipulation in financial reports. Third, as far as the model significance is concerned, in all three industries the models are highly statistically significant as it is shown by the p-values and the F-values of the model (always p-value = 0.000). The F-value is shown to be the highest in the manufacturing industry in all countries examined, and it is shown to be the lowest in the service industry. Fourth, in all countries examined the lowest R^2 is shown in the service industry. In two countries, the UK and France, the highest overall R^2 is shown in the retail industry. These results indicate that the variability of the stock prices is the lowest in the service industry, when taking into consideration financial information, such as earnings and cash flows.

Conclusions

Consistent with our hypotheses and our expectations, these results indicate that earnings and cash flow information is industry specific, that is investors and financial analysts pay different attention to earnings and cash flows depending on the industry they analyze. Specifically, investors value more the earnings in the service industry, partly because in that industry the manipulation of earnings is the least because there exist the lower accruals (i.e. depreciation, amortization, inventories, etc.). As far as the cash flow information is concerned, results indicate that investors value cash flow more in the manufacturing industry. This is not surprising, because as we have already argued, in this industry investors and financial analysts expect greater manipulation of earnings due to much higher accruals (i.e. depreciation, amortization, inventories, etc.), and thus analysts pay less attention to earnings and consequently pay more attention to cash flows.

The results of this study have practical implications as well and should be of great importance to the major stakeholders such as investors, creditors, financial analysts, especially with the latest events that are taking place, and the major collapses of giant organizations worldwide such as Lehman Brothers, Bear Stearns, among others. Regulatory bodies, investors, financial analysts and the financial press, blamed among others, the possible manipulation of financial information supplied to the investors by these organizations. The question raised, is whether this type of information is taken into consideration by investors in their investment decisions. Since the evidence in this study supports that there are substantial differences in the way capital market participants perceive financial information, such as earnings and cash flows in the UK, France and the USA, investors, financial and credit analysts should be very cautious when making investment or credit decisions. Thus, these capital market participants should take seriously into consideration, among others, the relevant factors examined in this study, such as how earnings and cash flow information is perceived in different industries. Furthermore, investors, financial analysts and credit analysts should be very cautious in their decision-making, since evidence shows that capital market participants do not reward firms with low quality earnings but instead capital markets pay much more attention to the quality of both earnings and cash flows, subject to the industry and country under investigation. This study encourages further research that may improve our understanding of the valuation of both earnings and cash flows at an industry level in the international capital markets. Future research may examine in more depth firm specific factors, such as quality of earnings, earnings transitoriness and credit risk.

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