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"DOES DIRECT CASH FLOW PRESENTATION HELP IN PREDICTING FUTURE OPERATING CASH FLOW?"

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Abstract

Research literature and regulators are unconditional in pointing the disclosure of operating cash flow through direct method a section of unique information. Besides the intuitive facet, it is also consistent in forecasting future operating cash flows and a cohesive piece to financial statement puzzle. Bearing this in mind, I produce an analysis on the usefulness and predictive ability on the disclosure of gross cash receipts and payments over the disclosure of reconciliation between net income and accruals for two markets with special features, Portugal and Spain. Results validate the usefulness of direct method format in predicting future operating cash flow.

Key Words: Operating Cash Flows; Direct Method; Financial Statement Presentation; *IAS 7;* Estimation Errors.

1. Introduction

Financial Statement Presentation is an ambitious joint project from IASB (International Accounting Standards Board) and FASB (Financial Accounting Standards Board), aiming to set standards on the conception and presentation of information in the financial statements that would improve the usefulness of that information while assessing the financial performance of a business enterprise. The project is focused three main propositions: on form and content, classification and aggregation, and display of specified items and summarized amounts on the face of the required financial statements (for both interim and annual periods). That comprises determining whether it requires the display of certain items that are determinant to be the key measures or if they are necessary for the calculation of key events.

In 2005, boards initiated the joint project on financial statement presentation, motivated by the collection of types of presentation of financial statements and aspiring to a more integrated and global economy, making it difficult to fully understand the relationship between the financial statements and the financial results of one single entity. After the enduring deliberations, the project evolved into phase B, where it was assigned three main priorities: the replacement of IAS (international accounting standards) 1 and IAS 7, the convergence of accounting rules and the revision on presentation of other comprehensive income. Changes are mainly due to the necessity of figuring out which format of operating of cash flow is more useful to investors: the one that uses the direct method or the one that uses indirect method.

Both regulators promote the disclosure of the direct method, pointing out that this method “is more consistent with the objectives of financial statements presentation”,

such as the ability to predict future companies operations and to provide an accurate situation in liquidity and financing terms. Additionally, Australia (Australian Accounting Standard Board 2004) and China (Accounting Standard on Cash Flow Statement – article nº 24) accounting regulators reinforce the generalized perception of direct method being a usefulness source of information since it requires the disclosure of the direct method as well as a reconciliation between net income and operating cash flow. [1,2]

Therefore, this study aims at providing evidence on two markets that have different regulatory requirements, concerning the format of the statement of operating cash flows: Portugal and Spain. I would also like to stress that my research is a formal response to the question raised by IASB and FASB on its joint project: "Would a direct method of presenting operating cash flows provide information that is decision-useful?" (Discussion Paper – Preliminary Views on Financial Presentation, page 78).

Thus, the purpose of this study is to understand the usefulness of the direct method of statement of cash flows for investors and how it is incorporated by stock prices. It is my belief that this research is highly contributive to existing and future literature since that due to the use of data from a country where regulators require the disclosure of the direct method, Portugal (Reg. 4/2004 and NCRF 7), and another where the indirect method is primordial, Spain (even though there is not a mandatory method). [3, 4]

[1] See Statement of Financial Accounting Standards (SFAS) No.95, Statement of Cash Flows (FASB 1987).

[2] Quote from "Discussion Paper – Preliminary Views on Financial Statement Presentation", paragraph 3.78.

[3] Regulated companies following IFRS accounting standards.

Throughout this project I assess (i) why the direct method is important as an unique piece of information that cannot be extracted from other financial statements; (ii) whether the direct method is useful and a inimitable source of development due to its predictive power in the computation of future Operating Cash Flows; and (iii) its impact on stock returns, since more information will mean more efficiency in market pricing.

Using a market efficiency oriented defense and supported by existing empirical evidence, Clinch et al. (2002), Krishnan and Largay (2000) and Orpurt and Zang (2009) provide facts concerning the predictive ability of the direct method regarding operating cash flows and earnings, essential tools on company valuations through its bond to free cash flow. However, while Krishnan and Largay (2000) and Orpurt and Zang (2009) find evidence of estimation errors on the computation of the direct method of operating cash flow through the reconciliation of financial statements, Clinch et al. (2000) ascertain the significant explanatory power of the direct method components over the accruals components presented on indirect method.

Furthermore, staff exposure drafts also suggest the effectiveness of direct method and recommend the preparation of empirical studies to extract a definitive conclusion on which method is more investors friendly. According to the "Outreach and Field Testing related to the July 2010 Staff Draft, Financial Statement Presentation", "the FASB's Financial Accounting Standards Research Initiative (FASRI) will further review the academic studies related to the statement of cash flows".

[4] NCRF 7 is the Portuguese regulatory document that obliges SME to present the operating statement cash flow with the direct method.

As all my research models deliver evidence in line with literature, results reveal that the disclosure of statement of cash flow through the direct method offers a unique source of information about gross cash flows inflows and outflows, which is useful in assessing liquidity trends and projecting companies' future cash flows analysis (Jones et al. (1995)).

The research consists of four cooperating sections that revise and present a methodology to address a conclusive study to the question: "Does Direct Cash Flow Presentation Help in Predicting Future Operating Cash Flow?". In section 2 is accessible the most relevant research works on the subject that provide a foundation for my research. Section 3 introduces my methodology and hypotheses under study, while section 4 and 5 report the statistical results and conclusions of research, respectively.

2. Literature Review

Articulation Errors

Despite the awareness manifested by accounting regulators on this topic, research developed regarding operating cash flows methods is still scarce and insufficient to bring light towards which method is more users friendly and useful to forecast future cash flows and earnings. Prior research on operating cash flows tends to focus only on the analysis of predicting power of the direct method when compared with the indirect method. Nevertheless, it is crucial to stress that the FASB statement on the direct method subject can be reached from information presented on financial statement data (FASB, 1987, paragraph 116 to 118) without incurring in onerous costs.

Focusing on this argument, Orpurt and Zang (2009) and Krishnan and Largay (2000), differentiate both methods through to what they call "articulation errors". This jargon rose from the attempt to compute the direct method through a reconciliation of other disclosed financial statement data, such as the balance sheet, income statement and the indirect method of operating cash flow. In fact, Krishnan and Largay (2000) use the same methodology as Livnat and Zarowin (1990): equations with items from both balance sheet and the income statement are used to find cash collected and cash paid to suppliers.[5]

Orpurt and Zang (2009) settle however on two different approaches to find an outcome to this problem. Thus, besides adding the reconciliation through the balance sheet and the income statement, they introduce a further stage and compute the direct method of operating cash flows from a reconciliation of the income statement and the indirect method of operating cash flows.

Both studies uphold that the direct method is an unique source of information to financial statements users and cannot be achieved from the other financial reports without a considerable loss of information, which is incompatible with the FASB assertion (FASB 1987, paragraphs 116, 117 and 118). Krishnan and Largay (2000) conclude that errors would be more material in cash paid to suppliers and employees, mainly due to the complexity involved on the calculation of this item. However, both groups showed a considerable propensity to display measurement errors, even when the sample is adjusted to the effect of firm size. Orpurt and Zang (2009) show that

[5] Regarding interest and income taxes paid, SFAS 95 requires that all companies report this information independently of which method is used to compute operating cash flows

articulation errors exist on both methods and that from the indirect method and the income statement there is a "substantial aggregation of and reclassifications between components" which provokes the deviation from the true direct method items. Furthermore, they conclude that the articulation errors that derive from the balance sheet and the income statement tend to overcome the reconciliation of indirect method and the income statement.

Forecasting and Predictive Power

Previous literature stresses the usefulness of the direct method over the indirect method, since it provides evidence in those transactions that affect the cash cycle of the companies**.**

In this spirit, CFA (Chartered Financial Analysts) Institute realized a poll with the purpose to "obtain CFA Institute members feedback on issues related to cash flows from operating activities and their presentation in the direct and indirect methods of cash flow statements". The results from this poll in Appendice 1 validate the usefulness of the direct method perceived by financial statements users. Hence, according to the CFA members, the direct method enables better forecasts of future cash flows, assesses company´s quality of earnings and is useful in communicating relationship between a company´s cash flow and its assets, liabilities, income, expenses, gains and losses when compared with the indirect method.

Krishnan and Largay (2000) also examine which method leads to superior forecasts of future operating cash flows. To study this question, they use the components from the disclosed indirect method and from the direct method, either disclosed or estimated

through the other financial statements as dependent variables, in order to run a cross-sectional model of operating cash flows one year ahead. Afterwards, authors employ a mean absolute percentage error and conclude that companies which disclose the direct method have an enhancement on their predictive ability, when compared with the ones that disclose indirect method.

Orpurt and Zang (2009) address this topic through the direct method´s forecasting models for future operating cash flow. This takes into account the estimation errors for cash received from customers and cash paid to employees and suppliers which resulted from the prediction of the reconciliation between both income statement and balance sheet and from income statement and indirect method. Consequently, the main objective of this research is to understand whether information presented on the direct method disclosures supplies information beyond the one provided by "articulation errors". Conclusions are aligned with literature, since that the direct method components disclosed by companies produce better cash flows estimates than the information gathered through the other financial statement.

Prior research also analyzed the association between current period accruals and cash flows components on future cash flows, Barth et al. (2001) and Dechow et al. (1994) approach this theme through the disaggregation of accruals and cash flows, providing evidence that this does indeed increase the quality of information to predict future cash flows and earnings. Cheng and Hollie (2008) contribute as well to this set of studies by analyzing the impact of cash flows, core (Sales, Cost of goods sold and operating and administrative expenses) and non-core cash flows (interest, taxes and other expenses) components in the prediction of future cash flows beyond accrual components. Theirs

study´s seems to be consistent with literature, since core cash flows components persist higher than non-core cash flows. In addition, Cheng and Hollie (2008) used the Barth et al. (2001) model, concluding that disaggregation of cash flows and earnings provides information to predict cash flows further than aggregate cash flows and earnings components.

Returns information

Earlier literature has also revised the impact of the direct method disclosure on stock returns. As stock prices gather the maximum information available in capital markets and the disclosure of the direct method helps to forecast future cash flows, stock prices should indeed reflect this impact. Clinch et al. (2002) study whether the direct method disclosures provide further information beyond that of accruals and aggregated cash flow when estimate returns. They examine data from Australian companies, which are obligated by *AASB 1026: Statement of Cash Flows* to disclose this financial statement through the direct method and also to present an indirect reconciliation of cash flows. Nonetheless, authors fail to find evidence of the superiority predictive power of the disclosed direct method, with mining and industrial companies being the only excepttions.

Orpurt and Zang (2009) also test the hypothesis that firms using the direct method offers more information about future earnings and operating cash flow and that is reverberate in firms' returns, for a sample of American companies. By employing a future earnings response coefficient model, as in Collins et al. (1994), Lundholm and Myers (2002) and Zarowin and Tucker (2006), where the association between current

years stock returns and future earnings are studied, results indicate that current stock prices from the direct method disclosing companies reflect more information. [6,7]

3. Research Design and Hypotheses

The intent of this research is to provide evidence regarding the usefulness of the direct method for financial statement users, due to the uniqueness of information it provides by disclosing operating cash flows. The analysis is based on three main hypotheses as detailed below.

Estimation Errors

If financial statements were according to accounting books, the presentation of the statement of cash flows for the direct method would not have consistent information content, since its components could be easily computed through interactions among balance sheet and the income statement. Nonetheless, past literature exhibits evidence of estimation errors derived from financial statement reconciliation and therefore this issue shall be addressed.

Based on this, my first hypothesis inquires if it is possible to derive the statement of cash flows via the direct method from the remainders financial statements without incurring in estimation errors.

[6] The main contribution to study was the inclusion of the variable three years return

[7] Zarowin and Tucker employed the framework to study the impact of Income smoothing on Earnings Information. The main contribution to model was the inclusion of several controls.

To provide information about the inflows and outflows of cash through the reconciliation of both balance sheet and income statement, I calculate *Cash Received from Customers* (equation 1) and *Cash Paid to Suppliers and Employees* (equation 2) out of Portuguese companies by eliminating the effects of accrual basis accounting. This is done in order to reach the net cash effect for the correspondent items. Such components of the direct method represent the larger volume of cash flows in the direct method when compared with the remnants components disclosed by Portuguese companies, *Payments related to income taxes* and *Other cash Receipts / Payments related with Operating Activities*.

The variables used to analyze the existence of estimation errors are the same used by Krishnan and Largay (2000), for *Cash Received from Customers* are *Sales* and *Change in Accounts Receivable* and to *Cash Paid to Suppliers and Employees* I make use of *Cost of goods sold*, *Depreciation*, *Selling and General Administrative Expenses*, *Change in Inventory*, *Change in Accounts Payable*, *Change in Other Current Assets* and *Change in Other Current Liabilities*, just as stated in the equations below:

$$Cash\ Received\ from\ Customers = Sales - Change\ in\ Accounts\ Receivable \quad \textbf{(1)}$$

$$Cash\ Paid\ to\ Suppliers\ and\ Employees = Cost\ of\ goods\ sold - Depreciation + Selling\ and\ General\ Administrative\ Expenses - Depreciation + Change\ in\ Inventory - Change\ in\ Other\ Current\ Assets + Change\ in\ Other\ Current\ Liabilities \quad \textbf{(2)}$$

In order to access the existence of estimation errors, the estimated components of the direct method are later subtracted by the disclosed components.

Predictive Power of Cash Flows

Literature is unanimous when identifying the direct method as the one enhancing the information conveyed by the statement of cash flows, as to forecast future cash flows and earnings. Therefore, in order to explore this proposition I develop an analysis surrounding the predictive ability of the direct method disclosures beyond the information present in the direct method components obtained through reconciliation. In summary, I will study if the direct method disclosures augment explanatory power over information imbed in other financial statements.

Initially, I decide to employ a model that forecasts operating cash flow one period ahead, to set a benchmark for later models:

$$OCF_{t+1} = \alpha_0 + \alpha_1 OCF_t + \varepsilon_t \qquad \textbf{(3)}$$

In this model OCF_{t+1} stands for *Operating Cash Flow* in one period ahead and OCF_t stands for *Operating Cash Flow* in the current period.

To exploit the predictive power of the direct method disclosures, model (3) is expanded by the disaggregation of the independent variable into the components present in the direct method models (4) and (5). Model (4) independent variables are the items disclosed in the direct method for Portuguese companies, while model (5) differentiates itself by using *Cash Received from Customers and Cash Paid to Suppliers and Employees* as independent variables, calculated through the reconciliation of the balance sheet and the income statement components. These two components account for the majority of companies' inflows and outflows.

$$OCF_{t+1} = \alpha_0 + \alpha_1 CRC_t + \alpha_2 CPSE_t + \alpha_3 TXS_t + \alpha_4 ORP_t + \varepsilon_t \quad \textbf{(4)}$$

In this model CRC_t stands for *Cash Received from Customers,* $CPSE_t$ stands for *Cash Paid to Suppliers and Employees,* TXS_t stands for *Payments related to income taxes* and ORP_tstands for O*ther cash Receipts / Payments related with Operating Activities*.

$$OCF_{t+1} = \alpha_0 + \alpha_1 ARCRC_t + \alpha_2 ARCPSE_t + \alpha_3 TXS_t + \alpha_4 ORP_t + \varepsilon_t \quad \textbf{(5)}$$

In this model $ARCRC_t$ stands for *Cash Received from Customer* (computed from the reconciliation of balance sheet and income statement); $ARCPSE_t$ stands for *Cash Paid to Suppliers and Employees (*computed from the reconciliation of balance sheet and income statement)*;* TXS_t stands for *Payments related to income taxes* and ORP_tstands for O*ther cash Receipts / Payments related with Operating Activities*.[8]

These three models should enable me to properly evaluate the explanatory power of the direct method disclosures. Thus, model (3) provides evidence about the explanatory of past operating cash flow on future operating cash flows and evaluates if the aggregate result is sufficient to explain future operating cash flows. Model (5), on the contrary, accounts for the explanatory power of the disaggregation of operating cash flows. And Model (6) studies if estimation errors furnish additional information to forecast future operating cash flows. For this purpose, one must thoroughly analyze models as a whole and not concentrate in a single variable.

[8] Estimation Errors are the ones previously calculated.

Lastly, in order to provide a model that predicts operating cash flows with the indirect method components from Spanish companies, I apply equation (6). It is important to stress that there is a disaggregation of the indirect method of calculating operating cash flows using a scheme presented by Stolowy and Lebas (2006), with an additional entry (Refer on Appendice 2 to a detailed description of decomposition). This extra item is *Extraordinary Cash Flows Items*, which accounts for some of the extraordinary cash consolidation, that are not included in the other two items gathered from DataStream data base. Therefore, due to database restrictions I decide to include this term.

$$OCF_{t+1} = \alpha_0 + \alpha_1 FOP_t + \alpha_2 NWCC_t + \alpha_3 EI_t + \varepsilon_t \quad \textbf{(6)}$$

In this model FOP_t stands for *Funds from Operating Activities* (Field 04201)*;* $NWCC_t$ stands for *Net Working Capital Changes* (Field 04831); *and* EI_t stands for *Extraordinary Items* (Field 04225).

In order to achieve a term of comparison, I apply the procedure described below to all models analyzed. To begin with, I deflate all variables by Total Assets to mitigate heteroscedasticity, as suggested by Orpurt and Zang (2009). Afterwards I run a pooled cross-sectional time series, starting with an OLS procedure, adjusted through a Robust Standard Errors procedure to correct heteroscedasticity. In order to check of an OLS procedure provides a suitable model and since I was in the presence of panel data I decided to pursue a further analysis. Consequently I run a fixed and a random effect model, being both models adjusted to reduce heteroscedasticity, and later compared them with a Hausman test. Finally I also run a Breusch-Pagan Lagrange multiplier (also known as LM test) to check if an OLS procedure could be enough to shed evidence on the matter.

Returns information

The ultimate value of getting operating cash flow information is measured through the company's activities summary, their stock prices returns. To gather evidence on the ability of the operating cash flow and in order to incorporate its predictive information on stock returns, I use of the model displayed below:

$$Ret_t = \alpha_0 + \alpha_1 Size_t + \alpha_2 Earnings_t + \alpha_3 Loss_t + \alpha_4 BtM_t + \alpha_5 Direct_t + \varepsilon_t \quad \textbf{(7)}$$

Where Ret_t is the compounded market stock prices return for the first three months of the period ahead (compounded returns computed with Market Close Price of December, Field 05070, and Market Close Price of March, Field 05025); $Size_t$ is the logarithmic function of companies' Total Assets (Field 02999) for the period in study; Earnings is the Earnings Per Share (Field 05201) of companies for the period; $Loss_t$ is an indicator variable, coded as 1 when the company presented a negative net income for the period and 0 otherwise (Field 01706); BtM_t is the Book to Market (Field 05476); and $Direct_t$ is a variable, coded as 1 when the direct method is used, and 0 when companies choose to disclose operating cash flow through the indirect method.

The selection of the variables was based in past literature, aiming to include a set of variables presenting a high explanatory power to returns. Despite what Orpurt and Zang (2009) did, where the returns variable accounts for the forward looking period of 3 months, although I decided to start in period t and not in period t-1, given that a shorter period of time affords a more accurate analysis on which variables change returns. The

loss variable, used by Orpurt and Zang (2009) in the returns model, was first identified by Hayn (1995) in order to control earnings differences in returns responsible coefficient models, therefore, given my model characteristics. I expect to find a negative estimated coefficient. The earnings variable is also included to control variations on earnings during the different periods. Book-to-Market variations among companies are analyzed in Fama and French (1993) ´s, "Three Factor Model" this shall be included to control for risk and I expect to find a positive coefficient for this variable. Finally, to assure homogeneity of the sample I consider the $Size_t$ variable (Freeman (1987)), in order to control for differences in information environments across the sample for which I expect to find a negative coefficient.

As for my study the variable of interest is $Direct_t$, since it accounts for the effects of the direct method on stock returns, I predict that the coefficient of this variable will assume a positive value, proving that the market does retain more information under the presence of the direct method disclosures.

4. Data and sample description

The sample consists of Spanish and Portuguese companies, listed in their respective stock exchange market, Bolsa de Madrid and PSI (Portuguese Stock Index). By selecting these two countries, I assure that I have in my study a group of companies' that disclose the statement of cash flows by both the direct and the indirect methods. The Portuguese stock exchange regulator, CMVM (Comissão do Mercado de Valores Imobiliários), initially issued Regulation n. º 4/2004, which later was revoked by

Regulation n. º 5/2008.[9, 10] This mandates listed companies to present the statement of cash flow by the direct method. In Spain, quoted companies follow IFRS standards, which encourage the use of the direct method but do not make it compulsory.

Most financial data was collected from DataStream Worldscope Global Database. Nonetheless, the data for the direct method analysis was hand collected directly from the audited Annual Reports displayed in the companies' respective website. This is because DataStream disclose the statement of cash flows of companies based on the indirect method.

The sample period starts in 2005, since it was the first year that regulation on the statement of cash flows for Portuguese companies entered into force, introducing some amendments to financial statements disclosures, such as the disclosure of the statement of cash flows through the direct method. It ends in 2010 due to constraints in the availability of 2011 data. [11]

From companies data available on DataStream Worldscope Global Database, I decided to exclude companies with missing data, financial services firms (as their cash flow activities are different from other industrial firms due to intrinsic business reasons and a more stringent regulation) and utility services firms, that were excluded as well, because

[9] http://www.cmvm.pt/CMVM/Legislacao_Regulamentos/Regulamentos/2004/Documents/9e972d1cbc8f419bb2184e65db0ae978Regulamento4_2004_vconsolidada.pdf

[10] Regulation n.º4/2004 and n.º5/2008 were published in "*Diário da República – Boletim da CMVM n.º 133 – Maio de 2004*" and "*Diário da República – Boletim da CMVM n.º 186 – Outubro de 2008*"

[11] I am using operating cash flow one year ahead, therefore in some models I only present data until 2009 for the remaining variables.

of the easiness of the predictability of their operating cash flows. The final sample consists then of 30 Portuguese companies and 90 Spanish firms. Table 1 displays information about the initial and final sample of firms that disclose the statement of cash flows through the direct and the indirect methods. One is able to conclude that our final sample has a small percentage of Portuguese companies, but that it is still enough to allow us to find a consistent and representative conclusion.

Table 2 presents the main statistics for the variables of models 3, 4 and 5. As expected, means are more sensible to big values than medians, which imply a substantial skew on sample. Moreover higher means were expected because the sample has a few big companies, as it was demonstrated by maximum and minimum values. Furthermore, table 2 also contains the descriptive statistics from model 5, including estimation errors of the direct method components. When compared with model 3, the variables $ARCRC_t$ and $ARCPSE_t$ exhibit higher means and medians, but lower standards deviation. These differences are justified by the lack of information about outflows, which reduce the number of cash movements linked with the operational side of companies.

Table 3 compares the Pearson correlations among components. The most correlated items are the main source of cash inflows (Cash Received from Customers) and outflows (Cash paid to Suppliers and Employees), which is a projected result. According to the cash cycle of companies, cash entries will trigger cash outflows in order to augment the operational side of companies. Moreover, correlations are lower than the provided by model. This fact is interpreted as a sign that variables are less linked with each others, as they move individually. It is important to refer that the high

correlation of CRC_t with $CPSE_t$ and $ARCRC_t$ *with* $ARCPSE_t$, -0.7773 and -0.7193 respectively, could carry some multicolinearity problems.

Concerning Spanish companies, Table 4 shows the statistics and correlations for Spanish companies inserted in model 6. Here, the mean and median are very similar. I attribute this fact to a larger sample, which motivates a trend to median equal mean, and to the disaggregation analysis that allow combining expenses with revenues, which reduce the differences among the sample. Moreover, maximum and minimum of the sample also validate this argument, since Spanish present smoother results when compared with Portuguese companies. Lastly, correlations also presented in table 6 do not disclose any visible problem multicolinearity problem, since the values are not high correlations coefficients among variables.

Portuguese and Spanish are two markets treated by the majority of Investment Banks as one market, the denominated Iberian Market.[12] Consequently, it is usual for Investment Banks to have only one office to accompany the companies inside this market. There are however some differences among the two subsample. To start with, although median are similar, the Total Assets average of Spanish companies is much larger than Portuguese sample, which means that there are some very large companies on the Spanish side. Standard deviation also corroborates with this conjecture, since it presents a large value for Span, proving that the Portuguese sample is more homogenous. The other major difference is comprise in the returns variable, as Spanish companies present a significant upside value, when compared with the performance of Portuguese ones during the time frame of returns.

[12] JP Morgan describes in this website "Spain & Portugal market" (http://www.jpmorgan.com/pages/jpmorgan/emea/local/es)

Although Book to Market and Earnings per Share, point out some similarities, these are not enough to mask the differences presented on the size variables. Regarding the Loss variable, negative Net Income during the period, Portuguese companies accounts for 31.5%, which is in line with its weight on the sample. Regarding the direct method variable, all Portuguese companies presented operating cash flow through the direct method, while all the Spanish companies in the sample choose the indirect method.

5. Results

Estimation Errors

The disclosure of operating cash flows by the indirect method deprives financial statement of an accurate analysis about the inflows and outflows of cash from companies. Estimation errors are typically attributed to non-operating expenses transactions reflected in balance sheet items, including noise to estimation for cash inflows and outflows.

Table 7 presents the descriptive statistics of "articulation errors" for cash received from customers, which are presented in thousands of Euros and reflect the enormous deviations from the true value of the item registered on the disclosed operating cash flow statement. Also, this table accounts for the estimation errors on cash paid to suppliers and employees and confirm the existence of noise in the operating cash transactions that does not allow financial statement users to replicate the information released on the direct method. Moreover, in both tables medians are lower than means, which indicates a small set of companies with large estimation errors.

To sum up, the size of the estimation errors confirms our hypothesis: the disclosure of operating cash flow statement through the direct method does indeed furnish a unique source of information that cannot be extracted from others financial statement, since their components include non-operating transactions introducing noise into the estimations.

Predictive Ability of Direct Method

The belief in a superior ability of the direct method to forecast future cash flows and earnings is defended by the majority of previous research. Nevertheless, companies with the possibility of choosing their method continue to prefer to use the indirect one. Throughout my research, the results are lined up with regulators and past literature, emphasizing the superiority of the direct method over indirect one for a forecast of future operating cash flows.

Table 8 presents the results of estimating models 3 to 6. Model 3 shows that past operating cash flows by themselves do not provide suffice information for a trend be traced on future operating cash flows. The results of model 4 indicate that this is in fact a valid model, as adjusted R- squared is 47.95%. This can be compared with previous literature, which found adjusted R-squared of 34.54% and 45.79% for Clinch et al. (2005) and Orpurt and Zang (2009), respectively. Furthermore, the p-value is almost 0 in every variable, demonstrating that variables explain the movements of future operating cash flows. As far as the benchmark model is concerned, one is able to conclude that it has less statistical significance than model 1, showing that the disaggregation of the operating cash flows in gross cash receipts and gross cash payments enhances the forecasting ability for operating cash flows. In model 4

$CRC_{t,}$, $TXS_t$and ORP_thave positive coefficients, the major item of outflows ($CPSE_t$), which is plausible with the levels of correlation

Model 5 explores the predictive ability of estimation errors. Results indicate that the model fails to provide evidence for future operating cash flows, by yielding an adjusted R-squared of 2.22%. Moreover, the value of F-test reveals that this model has no explanatory power. This leads us to conclude that "*Estimation Errors"* do not incorporate additional information, which is useful on the prediction of future operating cash flows.

Model 4 is obtained from the aggregation of some items of the indirect method from the Spanish companies' sample. This has an adjusted R-squared of 36.40% and all estimated coefficients are statistically significant, except for extraordinary items. This result is also aligned with the concept of the variable, since it only makes available information for specific modifications in the non-cash transaction.

However, model 4 provides evidence towards the superiority of model 5, if one uses the goodness-of-fit component to compare both models.

Returns information

My results in this line of research are conclusive, since the sample already provides some insight on the relation between returns and others components in the model (see table 8 in annex for a detailed description of results). The value of F-test statistically validates the model and furthermore, all variables display the expected sign on coefficients, excepting Earnings per Share. Although the R-squares is a low

The Loss $_t$ variable coefficient presents a negative value and significant statistically (p-value equal to 0.00%), meaning that investors penalize companies that disclose negative results. The $Size_t$ and the $Earnings_t$ also exhibits negative coefficients, although these variables do not provide enough statistical significance, since p-value assume values of 0.1546 and 0.4640, respectively. The $Book\text{-}to\text{-}Market_t$ displays a positive coefficient as predicted (0.045) and it is significant (p-value 0.001). Finally my variable of interest $Direct_t$ exhibits statistical significance, as well as a positive coefficient, which offer evidence that stock returns do react positively to direct methods disclosures. The result validates our stated hypothesis that the disclosure of operating cash flow statements enhances the information available in the market for investors and financial statement users.

6. Research Conclusions

In October 2009, IASB and FASB agreed that an entity should "present cash flows from operating, investing and financing activities using a direct method" (Paragraph 2, *Financial Statement Presentation – Statement of Cash Flows*) due to its predictive ability and cohesive power when in conjugation with other financial statements. Combining these features with the uniqueness information regarding uses and sources of cash, we are reaching the true core of my research. It is also crucial to consider the operating statement of cash flows to assess the cash conversion cycle of companies and their ability to yield cash within their activities.

After the validation of the direct method as a unique source of information, by assuming the existence of estimation errors that condemn the attempt of extract this information from the other financial statements, I was able to develop further my analysis, focusing

on to the predictive ability of their components. Related models on the subject present evidence enough to state that the disclosure of gross cash receipts and gross cash payments provides an important tool to forecast operating cash flows, even beyond the information gathered on the other financial statements and on indirect method.

Regarding the model on current stock returns, it was possible to conclude that it absorbs more information about the companies´ future operating cash flows when there is a disclosure of the direct method of operating cash flows, as it was proved by Orpurt and Zang (2009).

Despite all the research surrounding this theme and the convergence towards the usefulness of the direct method over the indirect method, major changes on accounting regulations are yet not foreseen. The main reasons for the neglect of the direct method are the high cost of such implementation on companies (Sondhi et al. 1988) and it requires information that is sensitive and hard to gather (Wallace et al.1997). Nonetheless, there is a clear bias towards the indirect method, despite the preference of regulators for the direct method, 97% of North American entities chose to disclose the indirect method, which difficult the shift from one system to the other without arising distrust from financial statement users.

To sum up, the present research responded positively to my three hypotheses, proving to be aligned with past literature and by validating the dexterity of the direct method disclosures in predicting future cash flows, as well as on the defense of the actual model that provides the main fields of cash inflows and outflows.

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