Database providers or managers: who predict best future performance?

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Firms often provide a large range of earnings measures to assist analysts, investors and others in their financial performance assessment. For example, the 2016 IFRS consolidated income statement of Airbus Group SE showed a profit of € 1,000 million. In parallel, the company disclosed in a press release[1] a *reported* Ebit (Earnings before interest and taxes) of € 2,258 million and an *adjusted* Ebit of € 3,955 million. For 2016, Arkema released an income statement that directly presented not only a net income of € 427 million, but also an Ebitda (Earnings before interest, taxes, depreciation and amortization) and an operating income of respectively € 1,189 and 734 million.

As highlighted by these examples, IFRS financial statements may contain several earnings metrics. More precisely, International Accounting Standards Board (IASB) prescribes that entities produce financial statements that provide a fair presentation of earnings totals for profit or loss, such as net income or comprehensive income (IAS 1 Presentation of Financial Statements). IAS1 also states that additional items, which represent earnings subtotals (Ebitda, Ebit or operating income), should be provided when such presentation is relevant for the firm's performance assessment (IAS 1:85). Within this framework, Airbus Group SE discloses in a press release a *reported* EBIT whereas Arkema directly provides Ebit and Ebitda in the income statement. Firms may decide to present a multiple step or disaggregated income statement. This is the case in particular for income statements prepared by nature (such as in the case of Arkema), which are more frequent in Europe than in the US[2]. Such a format enables the calculation of intermediate earnings (subtotals) before the net income figure. In contrast, function income statements are usually not disaggregated (single step

[1] https://airbusdefenceandspace.com/newsroom/news-and-features/airbus-delivers-full-year-2016-results-in-line-with-guidance/

[2] For example, Ding *et al.* (2008) show that French firms tend to use quite often an income statement by nature.

income statement), and companies may disclose earnings subtotals outside financial statements (as noted "*reported* EBIT" by Airbus Group SE).

In addition, firms can disclose *adjusted, Pro forma* earnings or non-GAAP (non-IFRS) earnings (Barth *et al.,* 2012). The Committee of European Securities Market Regulators (CESR 2005) and further the European Securities and Markets Authority (ESMA 2015) also use the wider terminology of "*alternative performance measures*" (APMs)[3]. The will to portray "Core earnings" is put forward by managers to justify adjustments to assess *Pro forma* earnings. Adjustments exclude nonrecurring transactions from IFRS earnings and are voluntarily disclosed in press releases. In the example of Airbus Group SE, the *adjusted* EBIT of € 3,955 million is calculated to "*capture the business margin by excluding material charges or profits caused by movements in provisions related to programmes, restructuring or foreign exchanges impacts as well as capital gains/losses from the disposal and acquisition of businesses*"[4].

Finally, in addition to IFRS financial statements and press releases, analysts, investors and others can use databases to get measures of earnings. Net income reported in databases is similar to net income in IFRS financial statements. Ebitda and Ebit (operating income) mentioned in databases can originate either from the IFRS financial statements when firms use disaggregated income statement, or can be calculated by database providers from the notes. Table 1 shows the range of earnings measures publicly available for a same firm according to the data sources.

Insert Table 1 about here

This paper has two main objectives. First, we investigate whether *Pro forma* measures have incremental usefulness over the database measures. More precisely, we compare a large comprehensive set of APMs: three *Pro forma* measures (*Pro forma* Ebitda, *Pro forma* operating income, *Pro forma* earnings) and three measures disclosed by databases (database-Ebitda, database-operating income and IFRS net income). Is a *Pro forma* Ebtida (or operating income or earnings) more informative about future cash-flows than its database counterpart measure? Second, we analyze the effect of the origin of the metric reported in databases. Databases can provide Ebitda and Ebit information by a direct coding from the income

[3] An APM is defined as "*a financial measure of historical or future financial performance, financial position, or cash flows, other than a financial measure defined or specified in the applicable financial reporting framework*" (ESMA 2015).

[4] https://airbusdefenceandspace.com/newsroom/news-and-features/airbus-delivers-full-year-2016-results-in-line-with-guidance/

statement (if the firm uses a multiple step presentation) or by calculation based on information found in the income statement and the notes.

This research is motivated by the two ongoing debates. The first one concerns *Pro forma* disclosure and the second one questioned the presentation of income statement. In the US, non-GAAP reporting has grown considerably over time (Bentley *et al.* 2016). For example, according to Black *et al.* (2016 a), the frequency of *Pro forma* earnings reporting by the S&P 500 firms has increased by 35% from 2009 to 2014, with 71% of disclosing firms in 2014. The same trend is observed in different countries even if Clinch *et al.* (2017) note some national differences by comparing the APMs reporting[5]. Following the proliferation of *Pro forma* reporting, international standard setters and securities regulators have recently expressed concerns. Because these earnings measures are not subject to any formal standard, they have been criticized for their lack of rigor and transparency (Cormier *et al.* 2011; 2016). In addition, lack of consistency in comparability across firms and time is key weakness of non-IFRS disclosure. Despite these characteristics, "*alternative performance measures can provide investors with appropriate additional information if properly used and presented*" (CESR 2005). With this respect, several recommendations have been given to disclosing firms: they should provide sufficient information to aid understanding of how APMs are calculated. For example, the CESR (2005) especially recommends: respect the IFRS-principles for financial statements for all types of financial information; definition of APMs used; reconciliation between APMs and IFRS; provision of comparative period information; indication of whether the APMs are audited. Further, the exposure draft issued in 2014 by the International Federation of Accountants (IFAC) establishes '*a benchmark for good practice for developing and reporting supplementary financial measures*'. The guidance of ESMA (2015) also promotes the usefulness and transparency of APMs following by the French market authority (AMF) that it published in 2016 its recommendations regarding the APMs disclosure in France. Finally, prior literature on non-GAAP (non-IFRS) disclosure is then inconclusive and underlines the ambivalent nature of *Pro forma* earnings. On the one hand, *Pro forma* measures are subject to management discretion and may mislead investors (e.g. Doyle *et al.* 2003; Bhattacharya *et al.* 2003; Marques 2006; Choi *et al.* 2007; Isidro and Marques 2013). On the other hand, they may better portray the underlying performance

[5] The study conducted by Clinch *et al.* (2017) covers eight countries: Australia, France, Germany, Hong Kong, Italy, Singapore, Sweden and the UK. In 2013, the countries with the highest levels of APMs disclosure are the UK and France. In contrast, Hong Kong and Singapore are the countries with the lowest levels of APMs disclosure.

(Venter *et al.* 2014, Bradshaw *et al.* 2016; Black *et al.* 2016) and be used by investors in their investment-decision making (Bradshaw and Sloan 2002).

In addition, our study is motivated by the concerns jointly expressed by the Financial Accounting Standards Board (FASB) and the IASB: the level of aggregation in current financial statements impairs financial statement users' ability to predict firms' future cash flows and to compare investment opportunities across firms. Thus, since 2010, the two boards have begun a joint project on *Financial Statement Presentation* (also known as *the Income Statement Project*) with the aim of increasing the level of disaggregation in firms' financial statements to improve the usefulness of the information provided (IASB 2010).

To conduct our research, we use a sample of French listed firms over the 2007-2015 period. We first concentrate on the statistical properties of *Pro forma* measures and database measures. We study their consistency over time and their relative magnitude. Consistent with prior literature (e.g. Doyle *et al.* 2003; Cormier *et al.* 2016; Guillamon-Saorin et al. 2017), we find that managers strategically disclose *Pro forma* metrics to positively influence the perception of financial statements users as *Pro forma* numbers regularly depict a more optimistic view of the firm performance compared to net income and database measures. This does not mean that *Pro forma* disclosure misleads investors as *Pro forma* disclosure may be useful to correct some IFRS biases (like excessive conservatism or an inability to recognize intangible assets).

Second, we conduct a determinants' analysis of voluntary *Pro forma* disclosure. We find that such disclosure is associated with decreasing performance and lower growth opportunities. This is consistent with a desire to influence market participants about the firm performance. However, we also find that the probability of such disclosure increases with firm complexity, internal and external monitoring. Finally, we find that the income statement format influences *Pro Forma* disclosure: firms that use a multiple step by disaggregated income statement are less likely to disclose a *Pro forma* measure. This is consistent with income statement format and voluntary disclosure to be substitute. These results suggest that *Pro forma* are intended by managers to help investors to assess the true performance of the firm.

Third, we study the usefulness of *Pro forma* measures and database measures. We start by investigating whether *Pro forma* measures have a superior predictive ability over database measures. Consistent with Doyle (2003), we define the predictive ability as the association with 1, 2 and 3-years ahead operating cash-flows. Then, we take into account the origin of the earnings metrics reported in databases. Taken together, our findings suggest that *Pro forma*

metrics usually have no information content over their respective measures presented in databases. Our results are robust to various checks for endogeneity. We also find that *Pro forma* Ebit and Ebitda usually have information content only when database measures are computed by databases. In other words, when managers commit to provide information through a disaggregated income statement, *Pro forma* measures are not useful; such is not the case, when only aggregated information are available. Our evidence highlights the usefulness of having a standardized multiple step in income statements, showing Ebitda and operating income. Such information dominates *Pro forma* disclosure in terms of ability to predict future cash-flows.

Our study makes several contributions to the literature. First, while previous studies lack a differentiated analysis of different *Pro forma* earnings, we extend the empirical investigation conducted by Reimsbach (2013) and more recently by Clinch *et al.* (2016) by distinguishing between various *Pro forma* measures. Reimsbach (2013) uses an experimental design to investigate if variations in the use and combination of non-GAAP earnings and "*earnings-before metrics"* (Ebit) affect nonprofessional investors when making investment-related judgments. Based on the valuation model of Ohlson (1995), the second study focuses on the value relevance of earnings subtotals (Ebitda and operating income) and of individual adjusting items (for example depreciation, disposals …). Our paper goes further by studying not only the usefulness of three *Pro forma* measures (Ebitda, operating income and earnings) but also the usefulness of counterpart measures disclosed by databases. We are the first to compare earnings measures according to the nature of providers: management or databases. In addition, our methodology differs from those used by Reimsbach (2013) and Clinch *et al.* (2016). Consistent with Doyle (2003), we analyze the usefulness of earnings measures toward their ability to predict future operating cash-flows. This study also contributes to the current debate on income statement presentation by taking into account the format (by nature or by function) of income statement. According to Anderson (2015), the disaggregation of financial statement information reduces the information asymmetry between outsiders and insiders: firms with disaggregated income statements have lower bid-ask spreads and short sellers paid lower loan fees for borrowing their stocks. Consistent with this evidence, we highlight the usefulness of having a standardized multiple step in income statements, showing Ebitda and operating income. Such information dominates *Pro forma* disclosure in terms of ability to predict future cash-flows. Thus, our results are likely to be of interest to both regulators and academics.

Table 1. Earnings measures according to data sources

Earnings measures	***Pro forma* measures (adjusted by managers)**	**Database measures**	**IFRS measures**
Subtotals	*Pro forma* EBITDA *Pro forma* EBIT	Database EBITDA Database EBIT	EBITDA EBIT
Earnings totals	*Pro forma* net income	IFRS Net income	IFRS net income
Data sources	Press releases	Financial statements (if multiple step presentation) Databases	Financial statements

With: EBITDA = Earnings before interest, taxes, depreciation, and amortization; EBIT = Earnings before interest and taxes (or operating income).