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Testing early signs of fraudulent financial reporting – case of WIRECARD

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Abstract: *The experience of fraudulent financial reporting scandals that shocked American corporate history in the early 2000's marked a turning point in the evolution of the financial auditing profession, out of a desire to restore investors' confidence in the integrity of listed companies' financial information. The establishment of a public supervision authority for audit firms (PCAOB), the establishment of an audit committee for listed companies or the obligation to report on the effectiveness of internal control over financial reporting, among with severe financial sanctions for corporate fraud, are the most representative legislative measures imposed in the US by the Sarbanex-Oxley Act (2002) to achieve this goal. To a large extent, these measures have also been adopted in Community law, most likely under the impetus of similar events, such as the Parmalat case (2003). Here that, at a not appreciable time distance, such a sensitive issue of fraudulent reporting returns to the center of investors' attention through the case of the German electronic payment processor - Wirecard (2020). The article aims to investigate possible early signals that could have indicated risk factors or circumstances that could have favored fraudulent financial reporting in the case of this issuer. In essence, the research methodology is limited to the application of the Beneish model on the annual financial reports from 2016-2018, in order to assess its validation in relation to the values of the score function (M).*

Keywords: *fraudulent financial reporting, Beneish model, fraud risk, investors*

JEL Classification: M41, M42, G41

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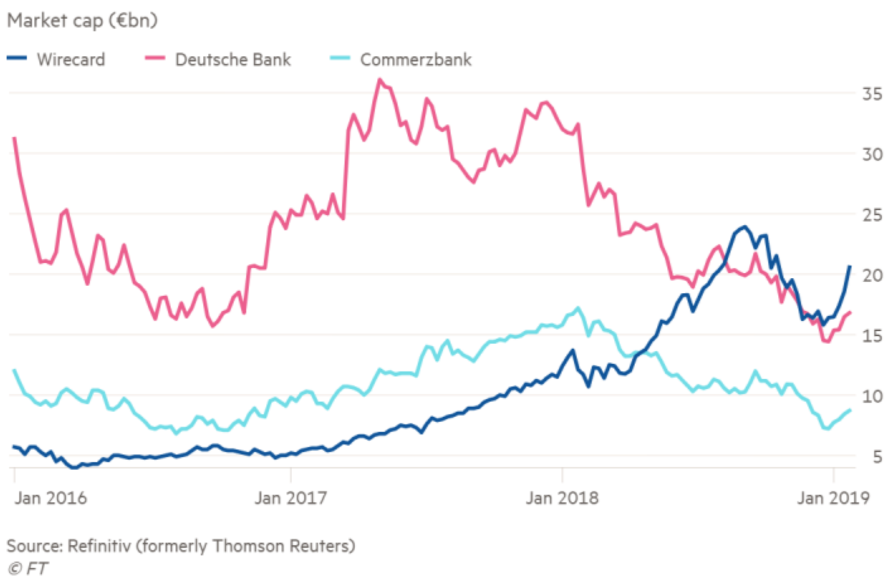
1 INTRODUCTION

Founded in 1999, the German company Wirecard was quickly considered one of the most promising financial technology (fintech) companies in Europe, a pioneer in the digital payment processing industry, enjoying the confidence of investors who discovered and recognized its potential. With almost 6,000 employees in 26 countries, the company reported revenues of over € 2 billion ($ 2.2 billion) in 2018, more than four times more than in 2013 (Riley C, McSweeney E., 2020). Reaching a market capitalization valued at € 20 billion, Wirecard managed to outperform in the famous DAX30 index of the German capital market, respectable financial institutions such as Deutsche Bank or Commerzbank (Fig. 1).

Figure no. 1 – Evolution of market capitalization for Wirecard company (2016-2019)



Source: Refinitv (former Thomson Reuters)

In June 2020, Wirecard announced the postponement of the publication of the financial results for 2019, pleading for the lack of cash in the amount of € 1.9 billion ($ 2.1 billion) that required more detailed investigations. This shocking announcement resulted in a 97% stock price correction in less than seven trading days (Fig. 2) and the resignation of the CEO, who was later charged with accounting fraud and market manipulation (Hallie A., Mason W, 2021). Although the scandal came to light only in June 2020, with the official auditor Ernst & Young refusal to certify the 2019 financial statements in the context of suspicions regarding forged balance confirmations for accounts opened in two Philippine banks, the company's success story began to falter starting with 2019 (January). Back then, the Financial Times journal documented an investigative article based on the "Project Tiger Summary" report provided by a Wirecard whistleblower acting as a compliance officer, worried about the lack of any measures to combat potential fraudulent operations, measures that would have been imposed in a company posing as a blue-chip in the financial services industry. This report alleged potential breaches of Singapore law, including falsification of accounting records, as well as fraudulent alteration of contracts to cover suspicious money laundering transactions.

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Figure no. 2 – Movement of Wirecard stock price (2017-2020)

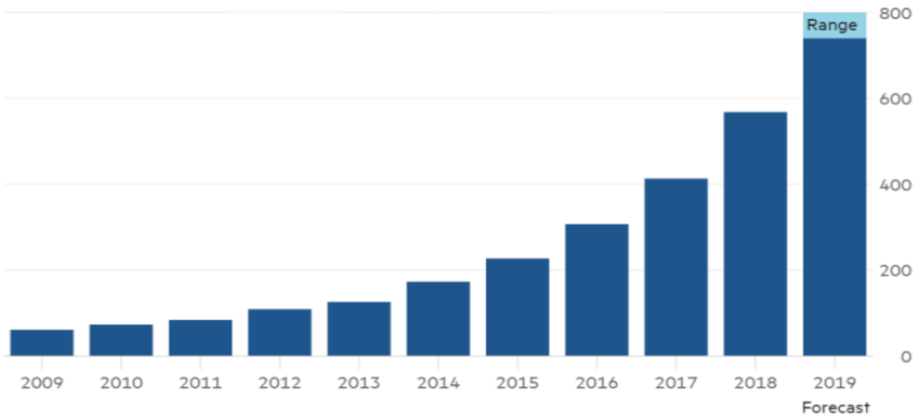
Source: Yahoo Finance

Towards the end of 2019 (October), the Financial Times journal published a new article that fueled additional suspicions about Wirecard's accounting practices. The information used to document the article indicated an apparent focused effort toward fraudulently inflated sales and profits reported by subsidiaries in Dubai and Ireland, by misleading auditor Ernst & Young (McCrum D., 2019). Although these were among the first concrete concerns about the integrity of the accounting and internal control practices of one of Europe's most prodigious financial technology companies, news of suspicious transactions followed the company for more than a decade. Thus, skeptical investors and financial analysts raised reasonable questions about the financial statements of the Wirecard group in 2008, 2015 and 2016, claiming some apparent inconsistencies. However, the company has always denied any abusive or fraudulent accounting practices, posing as a victim of market manipulation operations that favored short sales and strongly supporting the soundness of published financial figures (McCrum D., Palma S., 2019).

2 DEFINING THE RESEARCH PROBLEM

Analyzing the investigative articles published in conjunction with the Wirecard scandal, we could identify certain risk factors for fraudulent reporting, namely: (i) significant rates of increase in EBITDA (Fig. 3), with an average over 50% annually during 2016-2019; (ii) operations with a high degree of complexity, carried out by subsidiaries in different jurisdictions; (iii) legislative vulnerabilities regarding the electronic processing of transactions in various jurisdictions; (iv) a high degree of digitization regarding operations, in the absence of sound internal controls; (v) aggressive accounting practices for recognizing operating income; (vi) a high degree of subjectivity in the design of accounting estimates related to asset impairment (Discounted Cash Flows method).

Figure no. 3 – Evolution of Wirecard EBITDA (2009-2019) – million Eur



Source: FT, adapted by Dan McCrum and Stefania Palma (2019)

Outlining these circumstances in which risk factors for fraudulent reporting may occur, justifies a quantitative assessment that validates any early signals of corporate behavior that is likely to favor the manipulation of financial information. In this regard, a test of the annual consolidate financial reports from 2016-2018 was performed, using the Beneish model (1999). The Beneish model uses financial information to determine eight variables that generate a score-function (M) against which the probability that the reported results have been distorted in the sense of earnings manipulation, is measured. This model managed to successfully detect aspects compatible with fraudulent reporting by manipulating revenues, which were later confirmed in a 2001 resounding case of bankruptcy, known as the case of Enron (Spătăcean O., 2019).

3 PRESENTING THE RESEARCH FINDINGS

The M score values were determined based on the consolidated annual financial statements published by the Wirecard group for the 2016-2018 reporting periods. The details of the calculations performed for the score function (M) are delivered in Table no. 1.

According to the Beneish model, if the (M) score function registers values lower than the reference threshold (-) 2.22 it is estimated that a reporting entity is not involved in earnings management operations, while values above the threshold reference could admit otherwise. The values obtained by this score function in the case of the Wirecard group, for both reporting periods (2017 and 2018), were positioned in an area that could suggest the existence of a risk of fraudulent reporting by manipulating earnings, according to the Beneish model. Consequently, we consider that the research hypothesis, according to which the values of the score function should indicate the presence of a potentially fraudulent behavior, is validated, thus justifying the predictive effectiveness of the Beneish model. However, restricted public access to financial information for the 2019 reporting year, until the date of this article, constitutes a significant limitation of the case study.

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Table no. 1 – M Score values for Wirecard group during 2017 – 2018

(figures in EUR million) *Reporting period ended as of*	31-Dec-18	31-Dec-17	31-Dec-16
M Score Calculation			
Net Receivables	357.40	274.70	190.20
Sales	2,016.20	1,488.60	1,028.36
Net Receivables / Sales	0.1773	0.1845	0.1850
Days Sales in Receivables Index (DSRI)	**0.96**	**1.00**	
Sales	2,016.20	1,488.60	1,028.36
Cost of Goods Sold	1,090.00	788.80	530.76
(Sales - COGS)/Sales	0.4594	0.4701	0.4839
Gross Margin Index (GMI)	**1.02**	**1.03**	
Current Assets	3,925.50	2,751.40	2,095.60
PP&E	81.50	57.50	44.70
Securities	553.20	419.30	372.70
Total Assets	5,854.90	4,532.80	3,482.10
[1-(Current Assets+PP&E+Securities)/Total Assets]	0.2211	0.2878	0.2783
Asset Quality Index (AQI)	**0.77**	**1.03**	
Sales Growth Index (SGI)	**1.35**	**1.45**	
Depreciation	122.00	98.70	72.18
PP&E	81.50	57.50	44.70
Depreciation/(PP&E +Depreciation)	0.5995	0.6319	0.6176
Depreciation Index (DEPI)	**1.05**	**0.98**	
SG&A Expense	157.10	160.40	97.89
Sales	2,016	1,489	1,028
SG&A Expense / Sales	0.0779	0.1078	0.0952
Sales General and Administrative Expenses Index (SGAI)	**0.72**	**1.13**	
Current Liabilities	2,339.60	1,975.70	1,328.00
Total Long Term Debt	1,592.60	917.10	670.60
Total Assets	5,854.90	4,532.80	3,482.10
(Current Liabilities + Total Long Term Debt)/Total Assets	0.6716	0.6382	0.5740
Leverage Index (LVGI)	**1.05**	**1.11**	
Income from Continuing Operations	2,016.20	1,488.60	1,028.36
Cash Flows from Operations	749.60	563.50	294.35
Total Assets	5,854.90	4,532.80	3,482.10
Total Accruals to Total Assets (TATA)	**0.22**	**0.20**	
M Score	**(-) 1.232**	**(-) 1.161**	

Source: Author's projection

As the results obtained from the Beneish model testing confirm the validation of the research hypothesis, we consider particularly useful the application of this model as analytical procedures designed in the planning stage of a statutory audit mission performed for listed entities. Specifically, the auditor may consider using the Beneish model as risk assessment procedures projected to assess the risk of material misstatement of the financial statements caused by fraudulent earnings reporting. In this context, we note that the auditor of the German group Wirecard issued an unqualified opinion on the consolidated financial statements tested by the Beneish model, confirming to investors that they present a sincere and accurate picture of financial assets, liabilities and performance, such as and an adequate description of the risks and opportunities associated with future development strategies.

4 CONCLUSIONS

Beyond allegations and significant losses in investors' portfolios, a sad reality prevails, namely that the audit profession has suffered a new blow, its reputation and credibility being severely affected by the inability of a respected international audit firm to earlier detect a fraud of Wirecard proportions. Thus, EY auditors were heavily criticized for signing off the financial statements for the periods 2016 and 2018, without an independent confirmation of the existence of cash (Lacour J., 2020), one of the simplest and most efficient audit procedures for treasury. In these circumstances, important legal actions are being taken by the injured investors in an unprecedented financial scandal (Matussek K., 2020), which can be a serious alarm about the need to step up monitoring measures, both from the public supervisory authority of the auditing profession as well as the financial markets regulator.

Reasonably, one can anticipate a major importance that will be attributed to anti-fraud and integrity policies, doubled by a real awareness of the benefits of implementing an effective internal warning system within listed companies. Moreover, the protection of persons reporting breaches of European law is subject to the application of Directive (EU) 2019/1937, in connection with the implementation of which, a first report will be submitted to the European Parliament and the Council by the end of 2023. However, we consider that the effectiveness corporate fraud prevention measures may be substantially affected by the absence of an adequate degree of professional skepticism on behalf of statutory audit firms.

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