

The adoption of Covid-19 financial statements' exemptions by Italian firms: an empirical analysis

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Abstract

The aim of the research is to analyse the most relevant quantitative impacts on financial statements of the last 2020 regulatory changes (Italian D.L 104/2020) by shedding light on the magnitude of drivers that led the Italian companies to re-evaluate their corporate assets and to interrupt the depreciation and amortisation process. Then, multivariate regressions have been performed to identify the magnitude of the determinants of the corporate assets' revaluation and the interruption of the depreciation and amortisation process. The main significant variables of Model 1 – asset's revaluation are 2020 net income and the equity without considering the impact of the revaluation reserve. For what concerns Model 2 – interruption of the depreciation and amortisation process, the mostly significant variables are changes in revenue, EBITDA, net income and the value of the non-current assets. For both of them, the variable size is significant as well.

Key words: Covid-19, interruption of amortisation and depreciation process, revaluation of corporate assets.

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1. Introduction

According to the national accounting context, regulated by Civil Code and National GAAP (OIC), the drawing-up of financial statements depends on many principles and standards with the aim of providing an appropriate, accurate and clear economic information and financial situation of the firm for its primary users: financial providers, investors and other creditors (Reynolds *et al.*, 2006). Nevertheless, the informativeness deriving from financial statements and their disclosure may be threatened by random and sporadic events. Indeed, some standards state precise rules in order to encompass this intrinsic uncertainty, seeking to disclose information that reflect the real situation in which the company finds itself (e.g., IAS 37 – Provisions, Contingent assets and liabilities, OIC 31 – Fondi per rischi e oneri). Such sporadic and random events are associated with systemic crises, generally deriving from pandemics or natural disasters. They may jeopardise well-being, economies and businesses (Sargiacomo, 2015; Zhang *et al.*, 2009). In this current context characterised by many sudden, impactful and risky events, among which in the last times the Covid-19 pandemic and the Ukraine-Russia war are the most ones, socio-economic activities might be directly and adversely impacted. Covid-19 pandemic has generated relevant concerns with regard to economic shocks (Guan *et al.*, 2020), has increased the complexity surrounding organisations' accountability and governance (Rinaldi *et al.*, 2020) and, consequently, it has become a significant research stream in the field of accounting and management (Rinaldi, 2022; Verma and Gustafsson, 2020). Similarly, the Ukraine-Russia war has exacerbated global instability, leading to significant disruptions in markets, supply chains, and international trade, further intensifying geopolitical tensions and creating additional challenges for businesses and economies worldwide (Abbassi *et al.*, 2023; Aliu *et al.*, 2023; Mattera and Soto, 2023). Such events may be firstly relevant for non-financial and financial disclosure to be reported (Brennan *et al.*, 2022), secondly for the perceptions of the report users (Dyczkowska *et al.*, 2022) and thirdly for firm value (Bose *et al.*, 2022), stock returns (Ding *et al.*, 2021) and earning announcements (Fabrizi *et al.*, 2023), among the others. In order to mitigate such consequences and concerns deriving from the Covid-19 pandemic, Government Authorities called for some intervention.

The current research mostly focuses on the exemptions related to the chance of re-evaluating tangible, intangible and assets (Model 1) and the interruption of the depreciation and amortisation process (Model 2). The reasons underlying the choice of focusing on these two exemptions are the following. The chance of revaluating the corporate assets is not totally a new option that can be adopted by companies, since it has been repeated over the years. What is different from the present model is that in 2020 (and in 2008), there is the option of revaluating corporate assets just with reference to the Civil Code perspective, or from the fiscal point of view as well with extremely favourable conditions. We are facing a regulatory mechanism already applied, thus it is worth understanding the reasons underlying its adoption by firms. Moreover, the corporate asset revaluation is a valuable topic since it fits in a wide context linked cost model's exemption that characterises the Italian scenario of

financial statements. The originality of the option of interrupting the depreciation and amortisation process lies in its first application that has been further proposed until 2023.

Initially, the exemptions could be adopted only by 2020 financial statements. Thanks to the last regulatory changes (D.L. 228/2021), this option has been exercisable for 2021 as well, without considering whether the firm adopted the same option during the previous year. The aim of this regulatory change is not to further impact the income statement by adding up some charges computed for those assets that have not been utilised during the year due to this exceptional event. Thus, the missing recognition of such expenses overrated the net income of the period by including a potential profitability. Therefore, the regulatory sets out some limits in the profit distribution, by mandating that these profits have to be accounted for as unavailable retained earnings equal to the unrecognised expense.

Academic literature about regulatory changes deriving from these random and sporadic events mostly focused on topics as accounting regulation and corporate disclosure (Bonacchi *et al.*, 2023, Buchetti *et al.*, 2022), liquidity constraints (De Vito and Gómez, 2020), or implications with access loans and cost of debt (Mattei *et al.*, 2023). However, the effect of the regulatory intervention deriving from D.L. 104/2020 has merely been analysed from a qualitative perspective by Di Fabio *et al.*, (2023), that calls for further research about the deepening of Covid-19 exemptions by highlighting the characteristics of the adopting firms. Thus, the study aims at reducing this gap, by debating the current academic scenario. In general, the aim of this current research is to analyse the determinants of the magnitude of 2020 regulatory changes' adoption on financial statements. In more detail, the specific aim is twofold and it focuses just on two mechanisms out of four. Firstly, the study analyses the extent to which the main drivers conducted Italian companies to re-evaluate the assets. Secondly, it focuses on identifying the extent to which the main drivers led Italian companies to interrupt the depreciation and amortisation process. In other words, the aim is to assess the materiality of adopting both the mechanisms.

The study has practical and theoretical implications. From the practical implications, the research may be useful for regulators and policy makers to assess the impact of this new regulatory intervention. It may be essential to set the guidelines for a future enhancement, improvement and refinement of these policies towards a framing that better fits the needs of the companies (e.g., in case of an extension of these initiatives) and the stakeholders. In addition, it allows to highlight the intrinsic characteristics of the adopting companies of such exemptions and their behaviours after their first application.

On the theoretical side, it is worth noting that new research dealing with implications of large-scale global crises affecting organisations deserves much attention since it has still remained unexamined and unexplored in accounting and management research. Thus, the research contributes to this academic debate by strengthening the current debate about new mechanisms that affected 2020 financial statements and they have been still influencing the next ones. Moreover, it

is a way in order to test and strengthen the validity of the applied methodology to this field of research, further contributing to the debate as well.

The next parts of the manuscript present in Section 2 the literature framing, in Section 3 the methodology of the study, in Section 4 the results and, finally, Section 5 refers to the conclusion.

2. Regulatory and theoretical background

2.1 Regulatory background

Organisations, businesses, governments and communities generally are unprepared to respond to large-scale disruptive events as such. Indeed, their responsiveness is usually reactive rather than proactive and anticipatory (Leoni *et al.*, 2021). Therefore, authorities are called to issue interventions that are essential and crucial, aiming to reduce, neutralise and preserve the business from negative consequences that influence firms' economic-financial performance, going concern and capitalisation, among the others. Therefore, to preserve and help companies that lie within these crucial situations deriving from Covid-19 pandemic, Italian regulators initially adopted some mechanisms by issuing D.L. 104/2020, 15th August 2020 (revised by L. 126/2020, 13th October 2020).

These mechanisms can be applicable to 2020 financial statements and are:

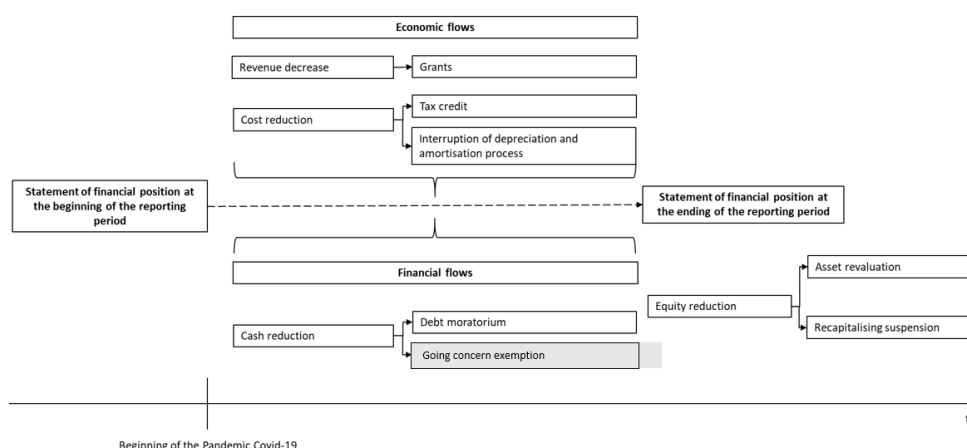
- the chance of interrupting the depreciation and amortisation process of tangible and intangible asset for the Italian GAAP adopter (OIC adopter), by not recognising up to 100% of the expense;
- the chance of re-evaluate corporate assets under certain conditions;
- the chance of not applying the going concern principle for those companies that correctly verified and applied it in the financial statements of the previous year;
- the chance of suspending the payments of the instalments (or just the principals) matured by loans, other general finances or leases;
- the interruption of the re-capitalising obligation due to matured losses over the year and the consequential not application of the dissolution causes.

The present research mostly focuses on exemptions associated with the opportunity to reevaluate tangible, intangible, and financial assets (Model 1) as well as the interruption of the depreciation and amortisation process (Model 2). For what concerns the former, the norm allows the OIC adopter to recognise a higher value of them. Generally, this process is adopted when companies find out some assets accounted for in the statement of financial position, that, due to the cost-model, are undervalued compared to their fair value. These assets must be already present in the accounting of the company on 31st December 2019 (and in the financial statements when the regulatory intervention has been adopted as well). Furthermore, the norm allows the fiscal recognition of the surplus deriving from the re-evaluation process. The aim of this regulatory change is, firstly, to carry out the hidden value of these assets due to the intrinsic shortages of the accounting cost-

model and secondly, to improve the capitalisation of the entity, cause the increase of the asset is counterbalanced by the recognition of an equity's reserve. Furthermore, the Italian Legislation (art. 60, comma 7-bis, D.L. 104/2020), in contraposition with the rules of the Civil Code (art. 2426, c. 1, n. 2,) allows to interrupt the process of amortisation and depreciation of tangible and intangible assets, by not recognising in the income statement up to 100% of the expense (Model 2). This chance allows the company to maintain the same value of such assets disclosed in the previous financial statements. The not-recognised depreciation and amortisation charge will be accounted for in the income statement of the subsequent year, extending as a consequence the amortisation and depreciation period.

The Italian supporting accounting measures, aim to preserve the net income, and more in general, the equity and the liquidity as well. These interventions may be graphically represented as follows (Figure 1).

Figure n. 1 – Supporting accounting measures issued by the Italian Government



Source: authors' elaboration

As presented in Figure 1, for contrasting the decrease of the revenues, the main intervention of the regulatory authority has been assigning to the companies some grants for sustaining the business and its return. Therefore, since the linkages among net income, cash flows and equity, these grants and their effect have a positive impact on the liquidity and the solidity of the company. Moreover, some interventions made by the authorities have the aim of containing the fixed costs, as the tax credits, helpful for sustaining some costs (e.g., rents), or, to maintain the marginality of the business, as the chance to interrupt the depreciation and amortisation of the tangible and intangible assets process up to 100% of the expense.

For what concerns cash flows, some financial debt's standstills have been introduced starting from 2020, other than the concessions of government guarantees in order to facilitate credit access. The objective of this intervention is to

contrast the liquidity constraints, by deferring the loan payment other than the leasing instalments. This exemption has no impact on the economic side.

From the equity perspective, the authorities have proposed the revaluation of the assets for allowing the companies to preserve the potential reduction of the equity due to the losses deriving from the Pandemic.

The effect of these norms is to reduce the probability of ending the reporting period with a loss. Nevertheless, it is possible that such interventions do not guarantee the generation of a profit. As a consequence, the occurrence of a loss may generate negative impact by reducing the capital shared, by conducting the company in the circumstance regulated by art. 2447 and 2482-ter of the Civil Code. The consequence of such situations is to bring the company to end its business activities, thus, the authorities have suspended this negative implication and the obligation of financing the company by providing new resources from the shareholders, giving the chance of restoring the reduced capital share.

Thus, if from a side, the effect of these exemptions is to contain the losses, preserve the equity and contrast the lack of liquidity, from the other side, the consequence is the drawing-up of financial reports not able to represent "a valuation fund that, even coming from the past management, represents a "service container" for the going concern of the company" due to the influence deriving from such norms and opportunistic behaviours with the mere aim of altering the net income and the financial capital of the company. Moreover, there is the risk of determining a set of values non fair-representing the stakeholder's decisions.

2.2 Theoretical background

Organisations, businesses, governments, and communities are generally unprepared to tackle large-scale disruptive events. As a result, authorities are required to implement essential and crucial interventions to reduce, neutralise, and safeguard businesses from the negative consequences. From 2020, the regulation authorities intervened many times with the aim of containing the negative effect of the Pandemic on financial statements. Indeed, disclosure has been affected by Covid-19 in terms of uncertainty, spreading its various effects according to the industry, the dimension of the board (Elmarzouky et al, 2021a, Elmarzouky et al, 2021b), among others. For instance, it revealed that managers were ineffective in highlighting the firm's exposure to pandemic risks towards investors (Loughran and McDonald, 2023) or in making earnings forecasts (Wan and Tian, 2022). Similarly, the Russia-Ukraine conflict has added another layer of complexity due to the several connected measurements that must be addressed to comply with financial standards. Firms operating in areas directly or indirectly linked to the conflict have experienced market volatility, supply chain disruptions, and straightforward geopolitical risks, leading to changes in stock prices and increased financial uncertainty (Najaf *et al.*, 2023). The war has particularly impacted firms trade relations with Russia and Ukraine, significantly altering their revenues and risk profiles (Abbassi *et al.*, 2022). Consequently, these disruptions have prompted many

companies to adopt more robust risk management and sustainability strategies to mitigate uncertain and risky situations (Mattera and Soto, 2022). Furthermore, market quality has deteriorated for firms trading in foreign stock markets, with indicators such as liquidity and price stability being negatively affected (Clancey-Shang and Fu, 2023). European financial markets, have experienced increased volatility linked to natural gas price fluctuations and broader macroeconomic uncertainty (Aliu *et al.*, 2023).

The regulatory changes introduced by Italian D.L. 104/2020, which allowed companies to revalue corporate assets and suspend depreciation and amortisation, can be examined through the lens of the agency theory. This theory emphasizes that agents (managers) may pursue actions that benefit their own interests, potentially at the expense of the principals (shareholders). While these exemptions were intended to provide flexibility for companies facing economic and financial uncertainties, they also create opportunities for managers to manipulate returns and results. By revaluing assets, managers can inflate the company's equity and solidity, potentially improving creditworthiness and external perceptions without generating real economic gains. Similarly, suspending depreciation boosts economic margins, presenting a more favourable short-term performance. For instance, these actions benefit managers by reducing the risk of debt covenant violations. However, they may not align with the long-term interests of shareholders, who could face reduced transparency, increased earnings volatility, or higher expectations for future performance.

These accounting interventions have adverse effects on the comparability of financial statements (Hao and Pham, 2022; Quagli, 2021). Consequently, academic research has explored the impact of such measures on various accounting aspects, including regulation, corporate disclosure (Bonacchi *et al.*, 2023; Buchetti *et al.*, 2022), and liquidity constraints (De Vito and Gómez, 2020). According to Bonacchi *et al.* (2023), commonly implemented accounting interventions include revaluing fixed assets and suspending impairment or amortisation of depreciable assets, along with other measures, such as examining how firms' access to relief mechanisms influences the information presented in their financial statements. Suspending depreciation and amortisation has been identified as a tool that significantly enhances, first of all, profitability (Buchetti *et al.*, 2022). Therefore, companies disclosing economic shortages, in terms of intermediate margins (e.g. EBITDA), or/and the net result and revenue of the year, would be more willing to adopt these exemptions, aiming to present a better performance to stakeholders and shareholders. In addition, such interventions would be helpful to reduce the number of firms reporting negative equity (Buchetti *et al.*, 2022). Additionally, studies have analyzed its effect on firms' access to larger loans and debt costs (Mattei *et al.*, 2023). Asset revaluation, on the other hand, has been framed as a mechanism to pursue the balance between equity and debt (Buchetti *et al.*, 2022), given such a relationship is a fundamental condition to improve creditworthiness and loans' solvency. Indeed, firms characterized by a solid equity tend not be willing to adopt such exemptions given a reduced probability of an immediate default and reduced constraints in getting further funds.

By deviating from standard financial reporting practices, these interventions aim to improve the informativeness of financial statements, particularly during periods when investors demand greater transparency to assess the risks and future cash flow impacts of events like the Covid-19 pandemic.

Bonacchi *et al.* (2023) emphasize the need for further research to evaluate the outcomes of these measures, which are designed to mitigate short-term losses and prevent equity erosion. However, Buchetti *et al.* (2023) caution that such regulatory interventions may negatively affect the quality of financial reporting. Scholars have identified the most commonly employed interventions by authorities as the suspension of depreciation and amortisation, as well as asset revaluation (Bonacchi *et al.*, 2023; Di Fabio *et al.*, 2023). In particular, Di Fabio *et al.* (2023) provide preliminary evidence on the qualitative effects of regulatory interventions introduced by D.L. 104/2020, based on a sample of Italian firms.

Thus, a study that entails the most important effect coming from the adoption of the suspension of the depreciation and amortisation process other than the chance of re-evaluating the assets is worth.

Thus, we posed the following hypotheses:

H1: Net income for 2020 is negatively associated with the materiality of the asset re-evaluation.

H2: Equity without the revaluation reserve for 2020 is negatively associated with the materiality of the asset re-evaluation.

H3: Change of the revenue occurred in 2020 is negatively associated with the value of the suspended depreciation and amortisation charges;

H4: Change of EBITDA that occurred in 2020 is negatively associated with the value of the suspended depreciation and amortisation charges;

H5: Change of the net income occurred in 2020 is negatively associated with the value of the suspended depreciation and amortisation charges.

3. Methodology

3.1 Sample selection, data source and period of analysis

The research design develops a quantitative methodology focusing on the Italian context that comprehends all the operating and active Italian “società di capitali”, thereby a kind of firm that presents a more analytic structure in terms of governance system, auditing and the distinction between corporate property and the member’s property. In more detail, the research deepens the context of the Italian firms that adopted the mechanisms issued through D.L. 104/2020, 15th August 2020 (revised by L. 126/2020, 13th October 2020) by focusing on the revaluation (Model 1) and the depreciation and amortisation interruption process (Model 2) models.

Data has been collected on AIDA Bureau Van Dijk. Timing refers to year 2020, namely the period that finds out the first adoption of the regulatory changes from

the Italian firms. The analysis characterised by a qualitative nature has been conducted by examining documents of the firms pertaining to the sample. In more detail, samples have been determined by employing the following refinements in the database (Table 1).

Table 1 – Sample of the models

Model	Refinements	Number of companies
Model 1 – Assets' revaluation	Legal form: società di capitali	2,161,185
	Legal status: active companies	1,516,955
	All companies with Tangible or Intangible Assets in 2020	962,392
	Revaluation reserve: all companies with a positive trend from 2019 to 2020	61,950
	Available data	59,942
Model 2 – Interruption of the depreciation and amortisation process	Legal form: società di capitali	2,161,185
	Legal status: active companies	1,516,955
	All companies with Tangible or Intangible Assets in 2020	962,392
	2020 depreciation for tangible assets and amortisation for intangible assets: values equal to 0 for both of them	99,772
	Available data	89,761

Source: authors' elaboration

About Model 1, the initial sample consists of 2,161,185 companies classified as *società di capitali*, which are capital companies such as S.p.A., S.r.l., and S.a.p.a. The second refinement restricts the sample to companies that were legally active in the period considered. This reduces the number of firms to 1,516,955, excluding those that were liquidated, or inactive. The third refinement includes only those companies that reported tangible or intangible assets in their financial statements for the year 2020. This criterion ensures the relevance of the assets' revaluation, reducing the sample to 962,392 companies. The fourth refinement selects only those companies whose revaluation reserve showed a positive trend from 2019 to 2020, indicating that a revaluation of assets actually occurred during the period. This narrows the sample further to 61,950 companies. The final refinement limits the dataset to those companies for which all necessary data are available for analysis. After applying this criterion, the final sample comprises 59,942 companies.

About Model 2, the starting point is a dataset of 2,161,185 companies identified as *società di capitali*. The second refinement limits the sample to companies that were active during the observation period. This reduces the sample to 1,516,955

companies, excluding those that were inactive or in liquidation. The third refinement selects only companies that had tangible or intangible assets recorded in their 2020 financial statements. This criterion ensures that only companies with potentially depreciable or amortisable assets are considered, narrowing the sample to 962,392 companies. The fourth refinement identifies companies that reported zero depreciation for tangible assets and zero amortisation for intangible assets in 2020. This specific condition targets firms that may have interrupted the normal depreciation and amortisation process. The resulting subset includes 99,772 companies. The final refinement limits the analysis to those companies for which all required data are available. This leads to the final sample size to 89,761 companies.

Thus, the sample consists of 59,942 companies for Model 1 and 89,761 companies for Model 2. These results mean that in 2020, 59,942 companies have re-evaluated the corporate assets whereas 89,761 have interrupted the amortisation and depreciation process. Since the total number of companies is equal to 962,292, it means that 6.23% adopted the first regulatory change whereas 9.33% adopted the second one. The sample relies on companies with tangible and intangible assets in 2020 given they are the only assets that may be re-evaluated thanks to the regulatory framework. For what concerns Model 2, the sample would have been affected by companies not disclosing depreciation and amortization due to the absence of investments requiring the disclosure of such costs in the income statement.

3.2 Model 1 specification

The OLS Model 1 is the following:

$$(1) \text{ Model 1: } \text{Revaluation_Materiality}_i = B_0 + B_1 \text{2020_Equity_No_Rev}_i + B_2 \text{2020_Net_Income}_i + B_3 \text{2019_Net_Income}_i + B_4 \text{2020_Leverage}_i + B_5 \text{2020_Ln_Tot_Asset}_i + \varepsilon_i$$

Model 1 has been performed with the aim of identifying the determinants of the magnitude of adopting the assets' revaluation, by focusing on the consistency of the equity (2020_Equity_No_Rev), economic performance (2020_Net_Income, 2019_Net_Income), indebtedness (2020_Leverage) and size (2020_Ln_Tot_Asset).

Table n. 2 - Variable description

Model	Variable	Description
Model 1	Dependent Variable Revaluation_Materiality	- Difference between 2020 and 2019 amounts of the revaluation reserve. If positive, it means that companies have adopted the option of re-evaluating their assets. Moreover, it has been considered the positive amount deriving from the asset's revaluation that has been directly attributed to the share capital.
	Independent Variable 2020_Net_Income	- Net income for 2020
	Independent Variable 2019_Net_Income	- Net income for 2019
	Independent Variable 2020_Equity_No_Rev	- Total amount of the equity for 2020 without considering the revaluation reserve or the positive amount deriving from the asset's revaluation directly attributed to the share capital.
	Control Variable 2020_Leverage	- Total liability out of equity
	Control Variable 2020_Ln_Tot_Asset	- Natural logarithm of total asset

Source: authors' elaboration

3.3 Model 2 specification

The OLS Model 2 is the following:

$$(2) \text{ Model 2: } \text{Susp_Depr_Amort_Materiality}_i = B_0 + B_1 \text{Change_Rev}_i + B_2 \text{Change_EBITDA}_i + B_3 \text{Change_Net_Income}_i + B_4 \text{2020_Leverage}_i + B_5 \text{2020_Ln_Tot_Asset}_i + \varepsilon_i$$

Table 3 shows the description of the variable included in the models.

Table n. 3 - Variable description

Model	Variable		Description
Model 2	Dependent	Variable	- Value of the suspended depreciation and amortisation charges.
	Susp_Depr_Amort_Materiality		
	Independent	Variable	- It measures the change of the revenue that occurred in 2020. It has been computed with the following formula: 2020_Revenue - 2019_Revenue
	Change_Rev		
	Independent	Variable	- It measures the change of the earnings before interests, taxes, depreciation and amortisation that occurred in 2020. It has been computed with the following formula: 2020_EBITDA - 2019_EBITDA
	Change_EBITDA		
	Independent	Variable	- It measures the change of the net income that occurred in 2020. It considers the amortisation that should have been included in the determination of 2020 net income equals to the same amount identified for 2019. It has been computed with the following formula: 2020_Net_Income - 2019_Depreciation_Amortisation - 2019_Net_Income
	Change_Net_Income		
	Independent	Variable	- Total of tangible and intangible assets
	2020_NC_Asset		
	Control	Variable	- Total liability out of equity
	2020_Leverage		
	Control	Variable	- Natural logarithm of total asset
	2020_Ln_Tot_Asset		

Source: authors' elaboration

Model 2 has been performed with the aim of identifying the determinants of the depreciation and amortisation process's suspension, by focusing on the impact of the Pandemic in terms of revenue (Change_Rev), marginality change (Change_EBITDA), non-current assets consistency (2020_NC_Asset) and size (Ln_Tot_Asset).

4. Results

4.1 Descriptive statistics

The following Table 4 presents the main results of Model 1 and Model 2.

Table n. 4 - Descriptive statistics of Model 1 and Model 2

Model 1	Number of Obs.	Minimum Value	Maximum Value	Average
Revaluation_Materiality	59,942	38.024	9,647.061	1,639.405
2020_Net_Income	59,942	-290.765	1,714.704	207.3741
2019_Net_Income	59,942	-70.852	1,731.589	232.9613
2020_Equity_No_Rev	59,942	-6	15,919.87	2,353.503
2020_Leverage	59,942	1.063	8.650	2.769
2020_Ln_Tot_Asset	59,942	3.850	10.400	7.171
Model 2				
Susp_Depr_Amort_Materiality	89,761	0.000*	52.676	5.961
Change_Rev	89,761	-576.732	114.875	-60.298
Change_EBITDA	89,761	-181.373	54.776	-17.742
Change_Net_Income	89,761	-230.591	69.807	-20.873
2020_Ln_Tot_Asset	100,770	2.288	8.792	5.613
2020_Leverage	100,761	-12.442	58.907	8.056
2020_NC_Asset	100,770	0.355	3,794.585	472.956

**the value has been rounded. Thus, the minimum value is not 0.000 since we considered only companies that have revaluated their assets*

Source: authors' elaboration

By comparing 2020_Net_Income and 2019_Net_Income, it is worth noting that the average value decreases over the two years. This is a signal of economic issues that may be deriving from the impact of the Pandemic Covid-19. The same is valid for what concerns the maximum value that, in 2020, is inferior that the maximum value of the previous year. 2020_Equity_No_Rev demonstrates that without considering the value of revaluation reserve, the minimum value of the equity is negative, highlighting a solidity issue for such entities.

For what concerns Model 2, descriptive statistics about change in revenue, EBITDA and net income highlight that for all the variables the average value is negative. This reveals that on average, economic results are decreasing from 2019 to 2020, demonstrating the reason for interrupting the depreciation and amortisation process, aiming to pursue better performances.

4.2 Multivariate analysis - Model 1: the effect of revaluating assets

First of all, authors have validated the assumptions of the OLS regression. The first check is to verify the absence of perfect multicollinearity for ensuring the lack of considerable correlation between the variables that would create a distortion in the regression parameters and in the standard error. This check has been made by considering Pearson correlations and VIFs. Starting from Pearson correlations, Table 5 shows the absence of a relevant multicollinearity among independent variables. The only exceptions are linked to 2020_Net_Income/2019_Net_Income and 2020_Equity_No_Rev/2019_Net_Income. Authors expected these results due

to their intrinsic and similar nature of the variables. Indeed, Net_Income variables are the same one lagged by one year. Moreover, it may be reasonable to find the correlation between 2020_Equity_No_Rev which may include the profit of the previous year as retained earnings.

Table n. 5 - Pearson correlations of Model 1 and Model 2

Model 1	Revaluation_Materiality	2020_Net_Income	2019_Net_Income	2020_Equity_No_Rev	2020_Leverage	2020_Ln_Tot_Asset
Revaluation_Materiality	1.000	0.4178	0.4916	0.6245	-0.2368	0.3551
2020_Net_Income	0.4178	1.000	0.7955	0.7073	-0.2036	0.4793
2019_Net_Income	0.4916	0.7955	1.000	0.7807	-0.1817	0.5367
2020_Equity_No_Rev	0.6245	0.7073	0.7807	1.000	-0.2181	0.5372
2020_Leverage	-0.2368	-0.2036	-0.1817	-0.2181	1.000	0.1688
2020_Ln_Tot_Asset	0.3551	0.4793	0.5367	0.5372	0.1688	1.000

Model 2	Susp_Dep_r_Amort_Materiality	Change_Revenue	Change_EBITDA	Change_Net_Income	2020_Ln_Tot_Asset	2020_Leverage	2020_NC_Asset
Susp_Dep_r_Amort_Materiality	1.000	-0.5241	-0.5109	-0.4539	0.3217	0.0227	0.2449
Change_Revenue	-0.5241	1.000	0.5185	0.4304	-0.2510	-0.0026	-0.1163
Change_EBITDA	-0.5109	0.5185	1.000	0.8201	-0.2425	0.0400	-0.1639
Change_Net_Income	-0.4539	0.4304	0.8201	1.000	-0.2808	0.0552	-0.2619
2020_Ln_Tot_Asset	0.3217	-0.2510	-0.2425	-0.2808	1.000	0.1799	0.6216
2020_Leverage	0.0227	-0.0026	0.0400	0.0552	0.1799	1.000	0.013
2020_NC_Asset	0.2449	-0.1163	-0.1639	-0.2619	0.6216	0.0234	1.000

Source: authors' elaboration

The second check is related to VIFs. Results of Table 6 demonstrates that there are no relevant multi-collinearity issues since all values are less than 4. The second assumption refers to heteroskedasticity that has been checked by performing the White test. The result confirms that Revaluation_Materiality variability does not change across values of the independent variables. Thus,

the model does not suffer from heteroscedasticity. The third assumption is linked to the autocorrelation of residuals, confirmed by the Durbin Watson (DW) test. Since the value is lower than two, it means that there is no autocorrelation. In the Model 1 DW is equal to 1.631. Therefore, according to the abovementioned tests, the authors can conclude that the multivariate regression analysis confirms the assumptions of the OLS regression, thus, Beta coefficients are statistically significant. The adjusted R-squared of Model 1 is 0.4081. It means that the model is extremely reliable because of the considerations made by the authors on the variables under investigation other than the originality of the research.

Table 6 presents the multivariate analysis shedding light on the relationship between the dependent and independent variables of the model.

Table n. 6 – VIFs, R squared and Multivariate analysis of Model 1

	VIFs	
2020_Net_Income	2.91	
2019_Net_Income	3.78	
2020_Equity_No_Rev	2.93	
2020_Leverage	1.22	
2020_Ln_Tot_Asset	1.71	
	Adj. R squared	
	0.4081	
	Beta	Significance
2020_Net_Income	-0.5346302***	0.000
2019_Net_Income	0.2298203***	0.000
2020_Equity_No_Rev	0.3565965***	0.000
2020_Leverage	-170.3742***	0.000
2020_Ln_Tot_Asset	121.2866***	0.000

* *p*-value < 0.1, ** *p*-value < 0.05, *** *p*-value < 0.01

Source: authors' elaboration

The objective is to verify if there is a relationship between the dependent variable, Revaluation_Materiality, and the independent variables 2020_Net_Income, 2019_Net_Income and 2020_Equity_No_Rev. In more detail the research aims to understand if the value of the corporate assets revaluation is affected by the consistency of the equity (2020_Equity_No_Rev), economic performance (2020_Net_Income, 2019_Net_Income), indebtedness (2020_Leverage) and size (2020_Ln_Tot_Asset). 2020_Net_Income significantly and negatively influences the dependent variable. Thus, 1% increase of 2020_Net_Income generates a decrease of 0.534 of Revaluation_Materiality. It means that firms with a reduction of economics results are willing to strengthen their solidity by revaluating its assets. In such way, the equity is enhanced, aiming to be more prepared for absorbing potential future losses.

Hence, the adoption of this regulatory change may be framed as auspicious for the future aiming to avoid that the higher value of the depreciation and amortisation charge generates losses. Thus, H1 has been confirmed. Moreover, the adoption of this regulatory change has been mainly adopted by structured companies given that an increase of 1% of 2020_Ln_Tot_Asset leads to an increase in the value of Revaluation_Materiality. In addition, results demonstrate that the revaluation of corporate assets spread its effect on the capitalisation and solidity of the entity as well. This last insight is confirmed by the significance of the variable 2020_Equity_No_Rev. Indeed, for the independent variable 2020_Equity_No_Rev, p-value is lower than 0.001 and thus it means that the coefficient is statistically significant. Therefore, the increase of 1% of 2020_Equity_No_Rev generates implications on the attitude to re-evaluate, increasing it for 0.356. It means that firms adopted this exemption with the only aim of contrasting the solidity and capitalising issues, confirming H2 as well.

Moreover, leverage is significant demonstrating that the decision of adopting this regulatory change depends on the magnitude of the debt. Since the revaluation increases the equity of the firm, it improves the relationship between equity and debt. Therefore, from this point of view it may be reasonable considering that companies are more willing to adopt this exemption for improving the solidity and the financial rating.

4.3 Multivariate analysis – Model 2: the effect of interrupting the depreciation and amortisation process

Once again, authors have validated the assumptions of the OLS regression by verifying the absence of perfect multicollinearity (through Pearson correlations and VIFs). The study shows this absence because all the values are, in mean, lower than 0.6. The only exception is the presence of multicollinearity between Change_Net_Income and Change_EBITDA. The authors recognize this issue given that both of them are economic measures for determining the return and the marginality of the business. The second check is related to VIFs. Results of Table 6 demonstrates that there are no relevant multi-collinearity issues since all values are less than 4.

The second assumption refers to heteroskedasticity that has been checked by employing the White test confirming that Susp_Depr_Amort_Materiality variability does not change across values of the independent variables. The third assumption is linked to the autocorrelation of residuals, confirmed by the Durbin Watson test. Since the value is lower than two, it means that there is no autocorrelation. In the Model 2 DW is equal to 1.940. According to the abovementioned tests, the authors can conclude that the multivariate regression analysis confirms the assumptions of the OLS regression. Therefore, Beta coefficients are statistically significant. The

adjusted R-squared of Model 2 is 0.3822 meaning that the model is reliable (Table 7).

Table 7 presents the multivariate analysis which exhibits the relationship between the dependent and independent variables of the models.

Table n. 7 – VIFs, R squared and Multivariate analysis of Model 2

	VIFs	
Change_Rev	1.41	
Change_EBITDA	3.44	
Change_Net_Income	3.23	
2020_NC_Asset	1.71	
2020_Leverage	1.06	
2020_Ln_Tot_Asset	1.82	
	Adj. R squared	
	0.3822	
	Beta	Significance
Change_Rev	-0.284968***	0.000
Change_EBITDA	-0.0700948***	0.000
Change_Net_Income	-0.0090117***	0.000
2020_NC_Asset	0.0011689***	0.000
2020_Leverage	0.0130441***	0.000
2020_Ln_Tot_Asset	0.8713012***	0.000

* *p-value* < 0.1, ** *p-value* < 0.05, *** *p-value* < 0.01

Source: authors' elaboration

The objective is to verify if there is a relationship between the dependent variable *Susp_Depr_Amort_Materiality* and the independent variables, namely *Change_Rev*, *Change_EBITDA*, *Change_Net_Income* and *2020_NC_Asset*. Table 7 highlights that *Change_Rev* affects the value of the *Susp_Depr_Amort_Materiality*. The coefficient is statistically significant and negative. Change in revenue provides negative (Beta coefficient equals to - 0.284) and significant results (*p* value < 0.01). This means that an increase of 1% of *Change_Rev* affects *Susp_Depr_Amort_Materiality* by a decrease of 0.284. This result is consistent with the analysis because it is reasonable consider that the adoption of this regulatory change is more suitable for companies that are finding economic constraints and decreases. Similar situation is encountered in the variable *Change_EBITDA* and *Change_Net_Income*. These variables are statistically significant and negative, indeed a change in *EBITDA* provides negative (Beta coefficient equals to -0.070) and significant results (*p* value < 0.01), whereas a change in net income, generate a negative and significant effect on the dependent variable. This means that an increase of 1% of *Change_EBITDA* affects *Susp_Depr_Amort_Materiality* by a decrease of 0.070, whereas an increase of 1% of *Change_Net_Income* affects *Susp_Depr_Amort_Materiality* by a decrease of 0.009. Once again it has been demonstrated that economic constraints and issues have implications on the need to interrupt the depreciation and amortisation process, confirming H3, H4 and H5.

Moreover, it was expected that companies with a higher value of tangible and intangible assets (that must be depreciated and amortised), are more willing to adopt this regulatory change, decreasing their negative impact on the economic

results. Therefore, the variable 2020_NC_Asset is statistically significant and negative, demonstrating that a change in tangible and intangible assets provides positive and significant results. An increase of 1% of 2020_NC_Asset affects Susp_Depr_Amort_Materiality by an increase of 0.001. It means that companies that mostly rely on tangible and intangible assets are more willing to adopt the regulatory change of suspending depreciation and amortisation charges. Furthermore, the overall value of the debt affects the adoption of the regulatory change as well, highlighting that, companies mainly influenced by an unbalanced structure of equity and debt, are more willing to adopt the same regulatory change. This is the reason why the composition of the equity and liability has no implication in terms of this exemption. The control variable 2020_Ln_Tot_Asset is statistically significant demonstrating that companies characterised by a higher value of the assets (namely, bigger companies), are more willing to adopt the regulatory change.

5. Robustness checks

To statistically confirm the results, the authors performed the same analysis by taking into consideration the dimension of each company. All the variables have been scaled by total assets in order to cope with the differences in size that could affect the regression results. In this approach, all the variables of the models have been computed out of the value of the total asset. Since the models have been scaled by the value of the total asset as at 2020, in the models related to the robustness checks the authors have not included 2020_Ln_Tot_Asset. Table 8 shows the descriptive statistics.

Table n. 8 - Descriptive statistics of Model 1-Robustness and Model 2-Robustness

Model 1 - Robustness	Number of Obs.	Minimum Value	Maximum Value	Average
Revaluation_Materiality	59,942	0.0223627	14.4898	2.344262
2020_Net_Income	59,942	-0.2377284	0.508213	0.0740966
2019_Net_Income	59,942	-0.130183	0.4629511	0.083051
2020_Equity_No_Rev	59,942	-0.007772	9.037037	1.428427
2020_Leverage	59,942	0.0000673	0.0443627	0.0068868
Model 2 - Robustness				
Susp_Depr_Amort_Materiality	89,761	0.000*	0.0765147	0.0111796
Change_Rev	89,761	-1.106772	0.461285	-0.1231888
Change_EBITDA	89,761	-0.3821512	0.2106909	-0.0347295
Change_Net_Income	89,761	-0.3757048	0.2187825	-0.0329787
2020_Leverage	100,761	-0.0845023	0.3780718	-0.0475998
2020_NC_Asset	100,770	0.0022796	0.9910591	0.4141775

**the value has been rounded. Thus, the minimum value is not 0.000 since we considered only companies that have revaluated their assets*

Source: authors' elaboration

The results of the robustness checks are in line with the previous analyses. Indeed, Table 9, Table 10 and Table 11 highlight a summary of the models, confirming that all the same variables are statistically significant.

Table n. 9 - Pearson correlations of Model 1 - Robustness and Model 2 - Robustness

Model 1 - Robustness	Revaluation_Materiality	2020_Net_Income	2019_Net_Income	2020_Equity_No_Rev	2020_Leverage
Revaluation_Materiality	1.000	0.2650	0.3139	0.5946	0.4643
2020_Net_Income	0.2650	1.000	0.6239	0.4095	0.0782
2019_Net_Income	0.3139	0.6239	1.000	0.4488	0.0967
2020_Equity_No_Rev	0.5946	0.4095	0.4488	1.000	0.3276
2020_Leverage	0.4643	0.0782	0.0967	0.3276	1.000

Model 2 -Robustness	Susp_Depr_Amort_Materiality	Change_Rev	Change_EBITDA	Change_Net_Income	2020_Leverage	2020_NC_Asset
Susp_Depr_Amort_Materiality	1.000	-0.3569	-0.3144	-0.3002	-0.0271	0.0587
Change_Rev	-0.3569	1.000	0.4135	0.3664	0.0533	0.0699
Change_EBITDA	-0.3144	0.4135	1.000	0.9317	0.0760	0.0244
Change_Net_Income	-0.3002	0.3664	0.9317	1.000	0.0766	0.0085
2020_Leverage	-0.0271	0.0533	0.0760	0.0766	1.000	-0.0404
2020_NC_Asset	0.0587	0.0699	0.0244	0.0085	-0.0404	1.000

Source: authors' elaboration

Table n. 10 – VIFs, R squared and Multivariate analysis of Model 1 - Robustness

VIFs		
2020_Net_Income		1.70
2019_Net_Income		1.77
2020_Equity_No_Rev		1.45
2020_Leverage		1.13
R squared		
0.4398		
	Beta	Significance
2020_Net_Income	0.1727844**	0.073
2019_Net_Income	2.173441***	0.000
2020_Equity_No_Rev	0.7882899***	0.000
2020_Leverage	108.2457***	0.000

* p-value < 0.1, ** p-value < 0.05, *** p-value < 0.01

Source: authors' elaboration

Table n. 11 – VIFs, R squared and Multivariate analysis of Model 2 - Robustness

VIFs		
Change_Rev		1.22
Change_EBITDA		7.95
Change_Net_Income		7.61
2020_NC_Asset		1.01
2020_Leverage		1.01
R squared		
0.1688		
	Beta	Significance
Change_Rev	-0.0174293***	0.000
Change_EBITDA	-0.0199943***	0.000
Change_Net_Income	-0.0145542***	0.000
2020_NC_Asset	0.0049427***	0.000
2020_Leverage	0.0017024**	0.022

* p-value < 0.1, ** p-value < 0.05, *** p-value < 0.01

Source: authors' elaboration

6. Discussion of results and conclusions

Many events, such as Covid-19 Pandemic, the conflict between Ukraine and Russia, difficulties in supplying materials and the increase of the input's prices have generated many crucial situations related to the health of the companies, namely in terms of economic results, financial solidity and going concern. Thus, to help these companies in overcoming such issues, Italian regulators initially adopted some mechanisms by issuing D.L. 104/2020, 15th August 2020 (revised by L. 126/2020, 13th October 2020). This research has been conducted with the objective of enhancing the state-of-the-art about such topics, other than to meet the call for further research coming from the current academic debate (Di Fabio *et al.*, 2023). Thus, Model 1 has been performed with the aim of analysing the determinants of the magnitude of 2020 corporate asset's revaluation by focusing on the consistency of the equity, economic performance, indebtedness, and size. It may be considered as a valuable topic since revaluation fits in a wide context linked to cost model's exemption that characterises the Italian scenario of financial statements. Model 2 has been performed with the aim of analysing the determinants of the magnitude of 2020 depreciation and amortisation process interruption, by focusing on the impact of the Pandemic in terms of revenue, marginality change, non-current assets consistency and size.

The results of Model 1 highlight that the decision to re-evaluate non-current assets is primarily influenced by the net income reported in 2020 and by the level of equity excluding the revaluation reserve, providing support for hypotheses H1 and H2. These findings suggest that companies with stronger solidity and/or facing economics difficulties in 2020, are more inclined to adopt the regulatory option of asset revaluation. The rationale lies in their greater capacity to absorb the future increases in amortisation and depreciation charges that stem from the upward adjustment of asset values. This implies that the primary motivation behind revaluation is not to artificially counterbalance economic distress or signal recovery, but rather to mitigate the potential negative effects of the crisis on capitalisation and overall financial solidity. Thus, asset revaluation is strategically employed not as a tool to obscure financial weakness, but to maintain a proper capital structure during times of economic uncertainty. Moreover, the statistical significance of leverage in the model underscores its role as an additional determinant of revaluation behaviour. Leverage appears to act as a mechanism for re-balancing the equity-to-debt ratio, reinforcing the notion that companies view revaluation as a means to support their capital structure rather than as a reactive measure to poor performance.

Model 2 provides valuable insights into the determinants behind the decision to interrupt the amortisation and depreciation process, shedding light on the materiality and rationale influencing this choice. In more detail, the changes in key financial indicators—EBITDA, revenue, and net income—are found to be statistically significant. This finding aligns closely with the central objective of the study, as it is reasonable to infer that companies experiencing a decline in economic performance are more inclined to suspend depreciation and amortisation charges. Thus, these

firms aim to avoid further reductions in economic margins, thereby safeguarding their profitability and maintaining an image of economic performance during periods of economic downturn. The suspension of depreciation and amortization can be interpreted as a temporary measure to mitigate the visible impact of declining margins on financial statements. Therefore, when faced economic shortages, companies may resort to this regulatory option to preserve economic and financial ratios, particularly those associated with profitability and capital adequacy. Furthermore, the analysis reveals that the amount of tangible and intangible assets held by a company is both statistically significant and positively associated with the likelihood of adopting this accounting exemption. This suggests that firms with a predominantly asset-intensive structure are more predisposed to suspend depreciation and amortisation.

The research has practical and theoretical implications. From the practical side, it is an assessment of the results deriving from the first-adoption of these regulatory changes, thus, it may be helpful for policy makers and regulators. Indeed, policy makers and regulators should be aware that such measures can be strategically used by firms to improve the relationship between equity and debt. Future legislation should consider setting clearer boundaries or guidelines to prevent opportunistic behaviour and ensure consistent application. Thus, the analysis of the first-adoption results allows to define the guidelines of the potential future development of these exemptions by better defining all the nuances in terms of weaknesses and strengths of these mechanisms. Auditors and analysts should pay attention to the context in which these accounting decisions are made, especially in light of their potential to distort financial performance indicators and asset valuations. Additional disclosures or reconciliations may be necessary to interpret a company's true economic condition. Investors and creditors should be cautious when evaluating companies that applied revaluation or suspended depreciation/amortization in 2020, as these choices may temporarily inflate asset values and profitability. A thorough analysis of the underlying operational performance, excluding the effects of accounting adjustments, is essential for informed decision-making.

From the theoretical side, the research enriches the academic literature about large-scale global crises regarding the reactions i) of the authorities dealing with such issues and ii) of the firms' behaviour in a national context. In line with the theory, companies may be willing to revalue assets, not to address economic weaknesses, but to enhance solidity and improve access to credit. Similarly, firms facing declining economic margins may interrupt depreciation to preserve net income, with the aim, for instance, to avoid covenant breaches or maintain performance-based incentives. These actions demonstrate how regulatory flexibility can enhance agency conflicts by enabling managers to prioritize short-term financial performance over long-term shareholder interests.

The research surely suffers from limitations. First of all, the analysis covers just one year of observation. Secondly, the unavailability of data has not allowed to consider more control variables. Nevertheless, future research may address these limitations by expanding the timing of the research until the last chance for adopting these exemptions, and missing data may be hand-collected aiming to provide a more

detailed overview of the control variables and their effect on the models. Moreover, it is worth mention that Model 1 includes only companies that re-evaluated their assets in 2020 introducing a selection bias that may be affecting the results. In the end, companies may have purchased the assets at the end of the year, clearly without recognizing any depreciation and amortization cost (although, generally it is included 50% of the cost according to fiscal regulations). In addition, further future research may deep the other exemptions issued by D.L. 104/2020, 15th August 2020, namely the chance of not applying the going concern principle for those companies that correctly verified and applied it in the financial statements of the previous year and the chance of suspending the payments of the instalments (or just the principals) matured by loans. Secondly, the analysis could be extended by analysing the effect of these exemptions on 2021, since the norm has been further proposed by the Italian Government. Thirdly, the sample may be clustered by under-categories of companies according to their legal forms (e.g., S.p.A., S.r.l.) or the dimension. Furthermore, the analysis could be strengthened by identifying other determinants.

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