
NFI FOR EARLY-WARNING.

CSR DIRECTIVE AND INSOLVENCY DIRECTIVE: THEIR COMPOSED IMPACT ON SMES. SEARCHING FOR A NEW MODEL.

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Abstract

Companies' crisis and insolvency forecasting using financial data has been studied for decades. The idea that Non-Financial Performance Indicators ("NFPI") can play an important role in a forecasting crisis and insolvency model is gaining ground. Avoiding crisis and insolvency requires close and continuous control over assets able to be liquidated, but often in the effort to keep financial balance, companies risk to sacrifice their ability to generate income. The use of the NFPI could contribute in managing this important critical issue, facilitating not only financial survival in the short term, but also economic recovery in the medium to long term.

Starting from the document issued by OIBR that promotes the use and communication of NFPI for SMEs, the paper aims, with a qualitative approach, to select a basket of NFPI to be added to those already provided for by the new Insolvency Code (D.Lgs 14/2019) and elaborated by the Italian National Council of Chartered Accountants to find out if the company is in a loss of viability situation or not.

The paper focuses on the following research questions: Can NFPI be used as instruments to better forecast crisis and insolvency risks? Is there a model that SMEs can implement?

Keywords – CSRD 2021/0104, Insolvency Directive 2019/1023, Non-Financial KPIs, NFI, crisis, early warning system, going concern, SMEs, corporate governance, ESG, Italy.

Paper type – Academic Research Paper

1. Introduction

With the enactment of the IC-Code - Italian Corporate Crisis & Bankruptcy Law (*Codice della Crisi d'Impresa e dell'Insolvenza*), that will come into force in the next 2023, an organization, administration and accounting model suitable for the nature and size of the company is being established. The goal of the legislature is to encourage companies to adopt a preventive approach and get early warning of crisis as required by the Insolvency Directive 2019/1023. Based on the use of the alert system managed by the IC-Code, some indicators must be established that can predict the state of the crisis and its severity. Therefore, potential recessions or real crises should be intercepted and confirmed through indexes and indicators, which represent a large amount of information available to company management and corporate institutions. In order for all of this to happen effectively, financial indicators need to complement other non-financial KPIs. Similarly, in order to verify the adequacy of the company's organizational, administrative, and accounting models, which in turn (also) produce information necessary to calculate the crisis index, it is appropriate to use indicators that are not only financial in nature. The proposal of the European Directive 2021/0104 of April 21, sets that the number of entities drafting non-financial statements needs to be significantly increased, including listed companies with less than 500 employees, that is, small and medium-sized enterprises and large companies whose securities are traded on the market. It does not introduce mandatory drafting of NF-KPIs for SMEs but includes the possibility that they can choose to draft structured non-financial disclosures voluntarily for inclusion in management reports, rather than in separate documents, based on specific standards and the principle of proportionality.

This paper aims to reflect on the role of non-financial information in early warning. The author's hypothesis is that since this particular category of information is forward-looking and focuses the attention of the company's management on the business prospects, it can certainly prove the opposite complementarity of intercepting and identifying critical situations.

2. Literature Review

Predicting crises by looking at financial indicators is a research field that originated in the 1930s. This argument, which has been of considerable

interest to credit institutions and the subject of countless studies by business economists over the past 90 years, has not been widely implemented in companies. The reasons for this situation are many. Difficulties in using, lack of information and insufficient design trends are some examples. A further explanation is that managers and entrepreneurs do not trust the expression of the mere compression of business activities in financial indicators, and believe that other qualitative variables are more suitable to represent the performance and value of the company.

In the light of this, it may seem useful to question the role of non-financial performance indicators (c.d. Non financial performance indicators or "NFI") in forecasting insolvency models. On the other hand, readers interested in studying the evolution of bankruptcy forecasting tools based on financial data may refer to contributions from Gissel, Giacomino and Akers (2007), which summarize literature from the 1930s and Altman which covers 50 years of Z-Score.

Some of the NFI that companies often monitor include customer and employee satisfaction, the quality of products and services provided, the market share occupied, productivity, and the rate of innovation. Most of the literature on NFI is devoted to assessing whether the use of these tools is related and can lead to improved business results. The answer seems to be largely positive.

Firstly, the inclusion of non-financial indicators allows shareholders to exercise greater control over management. Most of the literature on NFPI is devoted to assessing whether the use of these tools is correlated with an improvement in business results. Banker, Datar (1989), Feltham, Xie (1994), Holstrom (1979) and Banker, Potter and Srinivisan (2000) have shown that, consistent with the principles of agency theory, the inclusion of non-financial indicators in the assessment of management performance contributes to aligning ownership and management incentives, improving corporate profitability. In addition, the use of non-financial instruments to measure company performance also brings benefits from the management point of view, as documented by Eccles (1991), Johnson, Kaplan (1987), Kaplan, Atkinson (1989), Lambert (2001) and Schiff, Hoffman (1996). In general, it can be argued that a monitoring of business performance that takes into account qualitative elements allows signals from the market to be intercepted in advance of what would be possible by adopting only financial indicators (Barua, 1995). This allows management to take corrective action promptly (Rees, Sutcliffe 1994).

The use of the NFPI mitigates any distortive effects in the financial data, providing a more accurate representation of the actual state of the company (Ittner et al. 1997).

In general, the use of NFI in different asset categories is not uniform. Organisations operating in mature markets and competing through price competition have less incentive to adopt NFI and are more focused on the use of short-term financial indicators (Govindarajan, Fisher 1990; Simons 1987). On the other hand, innovative companies engaged in the development of new products and more focused on quality prefer to use long-term evaluation indicators, which are usually qualitative (Govindarajan, Gupta 1985; Bushman et al., 1996).

The relationship between the NFI and the time horizon considered by management may also refer to the firm in difficulty. Itner et al. (1997) shows that companies in crisis rely reasonably on short-term financial indicators and hardly consider the NFI.

Obviously, this behaviour is necessary: avoiding failure requires strict and continuous monitoring of cash and cash equivalents, and this can only be achieved by observing quantitative indicators. On the other hand, companies in crisis often sacrifice their ability to generate income to preserve liquidity. Continuing to use NFI can help reduce this problem, which not only promotes short-term financial survival, but also fosters medium and long-term economic recovery.

In practice, the NFPI related to corporate performance are primarily customer satisfaction (Anderson et al. 1994, 1997; Perera, 1997, and Ittner and Larcker 1998; Behin, Riley, 1999) and Total Quality Management (TQM) (Ittner, Larcker 1995; Symons, Jacobs, 1995; Chenhall, 1997). There are cases where the two NFPI mentioned are inadequate; therefore, the element that seems to have the greatest influence on the choice of NFPI of an enterprise is its strategy, which in turn depends on the competitive environment in which it finds itself (Ittner et al. 1997; Said, Hassabelnaby and Wier 2003).

At this point it is necessary to ask whether the NFI can also be used as an insolvency forecasting tool. The literature on the subject is not as rich as the previous ones: models for the forecasting of insolvency, since based on mathematical methods, are almost entirely provided by numerical data (and therefore by final balance-sheet indicators).

However, in order to predict insolvency, some suggestions on the most relevant NFI may be drawn from existing literature. There are two

categories of factors that influence the company's performance: the external ones and internal ones.

External factors include macroeconomic events, changes in consumer preferences, increased competition and new regulatory structures. Among these, the company has the opportunity to take the initiative, especially in terms of positioning on the market. In this sense, a useful tool, which can also take the form of NFI, is the famous model of the five forces of Porter (Porter 1980, 1981). According to Porter, the survival of an organisation depends on i) the probability of a new competitor entering the market, ii) the probability of a substitute entering the market, iii) the contractual power of the supplier, iv) the contractual power of the customer, and v) the existing level of competition.

Internal factors determined according to the principles of the company's resource-based theory (Barney 1991) include the level of human capital, the existence of a written strategic plan, the level of investment in innovation, the level of technology and the quality of the products/services provided.

Numerous empirical studies (Madrid-Guijarro, Garcia-Perez-de-Lema, Van Auken, 2008; Carter, Van Auken 2006; Bowman, Helfat 2001) show that the probability of insolvency is related to the contractual power of the customers and the level of general competition of the market. Other studies (Madrid-Guijarro, Garcia-Perez-de-Lema, Van Auken, 2008; Ahuja and Katila, 2004; Almus and Nerlinger, 1999; Leonard-Barton, 1992; Storey and Tether, 1998; Calvo, 2006; and P. et al, 2004) also show that the level of investment in innovation and quality control is negatively correlated with financial difficulties.

In the less innovative market, the factors most closely linked to the business crisis are the level of process automation and the overall level of competition.

The existence of a clear strategic plan, the level of managerial training and the quality of human capital have a positive impact on the possibility of failure of an organization, regardless of the type of market in which it operates.

The literature seems to strongly argue that integrating the management control system with NFPI improves profitability and that the use of NFPI is a function of the competitive environment in which the company operates, and the time horizon considered by its management. In particular, it appears that the adoption of NFPI aimed at monitoring i) the contractual power of the customers, ii) the overall competition rate, iii) the investments in

technological innovation, iv) the quality of the products/services offered, v) the presence of explicit strategic plans and vi) the quality of human capital has positive effects on the prevention of insolvency in the long term.

3. CSR Directive 2021/0104 and Insolvency Directive 2019/1023: their composed impact on SMEs.

The proposal for a European Directive 2021/0104, which provides for a significant increase in the number of companies required to draw up NFPI Report (including listed companies with fewer than 500 employees, that is, SMEs whose securities are market treatment and large companies, even if not listed), does not introduce any mandatory Report for non-listed SMEs. Anyway, it provides that they may opt for the voluntary drafting of structured Non Financial KPIs dashboards. These can then be included rather in the management report, or in a separate document, on the basis of dedicated standards and in consistency with a principle of proportionality.

The 2021/0104 Directive proposal uses a proportional approach to determine which companies will be subject to mandatory reporting requirements. Except for SMEs listed on the EU regulatory market, it does not impose new requirements on non listed SMEs. The proposal exempts listed micro companies from mandatory reporting obligations. Standards for large companies and separate and proportionate standards for small and medium enterprises need to be adopted. To help ensure investor protection, all companies listed on a regulated market should, in principle, comply with converging disclosure rules. SMEs standards need to be adjusted according to the capabilities and resources of such companies. Although SMEs listed on a regulated market will be required to use international ratios, non-listed SMEs may choose to use these standards on a voluntary basis. Non-listed small and medium-sized enterprises should have the opportunity to refer to specific SMEs Sustainability Reporting Standards. These should be designed to enable any SMEs to report information in a cost-effective manner in response to the large number of requests for information they receive from other companies with which they do business (such as banks, insurance companies, and large corporate customers) and to help determine limits stakeholders can reasonably expect to be provided by SMEs. Such standards should also help SMEs attract additional investment and funding, and fully participate in and promote the transition to a sustainable economy outlined in the European Green Deal.

4. The Italian context.

Given the Italian productive/industrial structure which is characterized by thousands of SMEs, studying the adoption of a model which introduces both financial and non-financial performance indicators (NFPI or NFI) represents a significant example.

In particular the introduction of a basket of NFI would be of support to the Italian Chartered Accountants National Council in order to develop a more effective crisis official prevention dashboard. The changes introduced by the new Crisis and Insolvency Code (*Codice della Crisi e dell'Insolvenza - CCI*), which introduces the Insolvency Directive suggestions, have given new light to the issue of organisational, administrative and accounting structures and procedures for all enterprises, including SMEs. It is important to point out that all changes to the Italian Civil Law regarding compulsory proportionally adequate structures and procedures are in force from March 2019 and were not involved in any deferrals of the entry into force of the CCI as a whole. The entrepreneur operating in corporate or collective form must establish organisational, administrative and accounting set-ups, appropriate to the nature and size of the undertaking, including the early detection of the company's crisis and the loss of going concern. Tools implemented must be such as to make possible the timely adoption of turnaround instruments and the recovery of the business. CCI provides for obligation also for individual entrepreneur who are asked to take appropriate measures to timely detect critical issues.

4.1 OIBR 2018: *Integrated Reporting for SMEs: Implementation Guidelines*

In 2018 OIBR - *Organismo Italiano Business Reporting* (previously *NIBR Italian Business Reporting Network*) has issued the Document *Integrated Reporting for SMEs: Implementation Guidelines* (2018). It aims to give the IIRC framework a specific meaning for small and medium-sized enterprises and provides them with method-oriented tools that can support. The basic idea is that for SMEs, integrated reports may be an appropriate tool to deal with all public and private organizations that affect the value creation process in any way, providing disclosures about the company's past and future (Panizza et al, 2020). A integrated report must first provide a general overview of the organization's activities and operating environment. In particular, information are needed about the internal organization, such as its mission and vision, strategy and goals, and information about the external

environment, such as the socio-economic background or market characteristics. In addition SMEs, which are often characterized by family relationships, should appropriately bring this information to attention in the report to clarify the typical characteristics of their company for the benefit of users. In *2018 OIBR-Guidelines* KPIs are divided into general indicators, industry indicators and company indicators. The latter can be used by companies to best represent their expertise and characteristics in the value creation process. In particular, these indicators should be related to the organization's strategic goals, should effectively represent the value creation process and should be reliable and comparable. Although there are no specific restrictions on the selection of KPIs included in the report, SMEs should only choose KPIs that are suitable to represent their value creation process based on the above principles. Therefore, the selection of indicators should help to summarize and effectively represent the current situation and future prospects of the organization and avoid information redundancy, thereby hindering its integrity and clarity, rather than benefiting it. In particular, general KPIs can be entered in the initial part of the integrated report, in which a general overview of the company is provided, and more detailed NFI can be listed in the specific performance section. The company should provide KPIs covering all operating processes and activities, and be able to fully describe the uniqueness and particularity of its value creation process. When using department-specific KPIs, or even organizational-related KPIs, it is necessary to add a section at the end of the report, which contains keywords and explanations of various indicators used, so that everyone can recognize the same meanings to the vocabulary used avoiding any confusion.

4.2 OIBR draft 2021: *NFI for Adequate Governance and Early Warnings in SMEs.*

In the previous paragraphs, it is often mentioned that non-financial indicators play a vital role, because they are separated from accounting methods and face the future, so they have high predictive value. However, it was also mentioned that it is not easy to determine non-financial indicators that may be sufficient to represent the company's future prospects. To this end, it is necessary to understand the business and management events and be able to determine which key success factors should be considered accurately and integratedly. To this end, the company should implement an effective management control system, which almost seems to have been implicitly enforced (Riva et al, 2020) to meet the requirements of adopting

appropriate organizational, administrative and accounting models, but also to determine the correct non-financial KPIs for identifying potential crisis situations (Panizza et al, 2020). For their construction, such indicators require careful assessment of the risks faced by the company. A risk management system that facilitates risk detection, measurement, acceptance and response, and facilitates the selection of risks to be avoided, that is, the risks that can be mitigated or transferred to others, is essential for constructing non-financial indicators that help control the state of health on a forward-looking basis.

The Research Team in charge of drawing up the Document has been working for almost one year and has issued a draft currently being examined by the OIBR steering committee. The draft analyses the description of the state of the art stating which are the main sources that represent references for non-financial information in the institutional, professional and academic spheres. Generally accepted international and national principles and papers issued by professional associations were mapped for such purpose. Some essential theoretical contributions were also recalled, providing an understanding of their development also in historical terms. The review of previous researches and contribution has made it possible to highlight how the need to provide information on governance, i.e. on a company's corporate organizational model and arrangement and effectiveness thereof for the purpose of monitoring assumed and potential risks, has so far been emphasized by many researchers. It is pointed out, that there has not yet been any specific attention to the issue of identifying the likelihood of a future crisis using non-financial indicators. The OIBR draft develops a benchmark method to describe organizational, administrative and accounting structures and procedures by using NFI to supplement financial statements of SMEs. It also tries to identify NF-KPIs for forecasting crises by proposing a dashboard to reach the goal. Reference principles and documents are usually set and drafted on a going concern basis and therefore propose the interpretation of non-financial information, structurally closer to the company processes and stakeholders and therefore structurally forward-looking, to assess the company's business outlook. OIBR proposes a different and symmetric interpretation of the indicators significance, as instead of emphasizing the demonstrative value of attractive and positive elements, it is concerned with the early warning potential useful for an effective detection of risks and, consequently, for the planning of pre-emptive actions.

5. NFI for early-warning

The dashboard 2021 OIBR Draft identifies KPIs for forecasting crises by proposing a set of possible non-financial data and structuring them according to the possible external or internal stakeholders involved. Referring to external relations KPIs the first issue considered consist in risks coming from the corporate environment. External events may have impact on the company. Therefore it is important to take awareness about them. Two main factors need to be considered: if the risk is (or not) beyond the company's control and if its fulfilment will have a certain degree of impact on it. Once issues have been identified, it is necessary to determine the impact and likelihood of the related events. The extent of the environment considered is defined by the policies and strategies pursued by the company, from its scale and international choices. A second topic considered particularly relevant factor in predicting corporate crises is corporate reputation. It depends on three key pillars (Poma et al, 2021): product quality, ability to participate, and authenticity. In order to reduce reputation risk, one of the first things to do is obviously to minimize the possible causes of reputation crisis (Winter et al, 1998). One of these reasons usually lies in incorrect, reckless, inconsistent, and untrue company communication (Siano, 2012) and marketing activities. Its basic function includes conveying to the outside of the company a "commitment" about its product quality level, and actions taken for profit and inform the public of the actual results achieved by the organization. Relationships with financial institutions are important in crisis situations and in phases that are usually characterized by financial stress, the existence of outstanding debts, and widespread payment delays. The debt structure of SMEs often has an imbalance between debt and equity. Debt is usually owed to banks and financial institutions and is often short-term. Therefore, it is vital to develop KPIs that can provide sufficient information about the structure and evolution of transactions with lenders over time, the nature of transactions, the number of active lenders, technical financing methods and repayment conditions, and guarantees in place. Providing non-financial KPIs on customer size is undoubtedly an important factor in predicting corporate crises. The first step in defining customer related KPIs is to transform the company's strategy into a target that can be used as a market benchmark, that is, the demand segmentation process, which aims to identify the customer groups that the company serves with similar needs. Setting up the indicator dashboard allows us to understand: i) whether the company's unique expertise can retain existing customers by consolidating the company's positioning and the ability to acquire new customers; ii) what is the current composition and stability of the company, paying attention to the

concentration and duration of open positions, so as to assess the risks associated with the ongoing activities, including financial risks. It is appropriate to understand the company's activities throughout the supply chain, including managing all involved in product or service creation, order fulfilment, and tracking of important supply-related information. A supplier's bargaining power and its ability to impose sales terms are affected by a variety of factors, including: the number of major suppliers, the availability of alternative materials, their contribution to the company's product quality characteristics, the relationship between cost withdrawal and downstream integration, and risk. Through the analysis of these factors, relevant information can be obtained that affects the company's strategic decision-making and has an impact on its competitive positioning. The establishment of the indicator dashboard allows us to understand: i) proactively understand whether the company's transactions with suppliers are stable enough, and whether the supply chain is consciously mapped and managed, so as to understand the flow of the supply chain; ii) in the final assessment, what is the current composition and stability of the supplier, determine any concentration of orders and assess any risks that may arise from it. Relevant internal relationships have been identified by 2021 OIBR Document as follows: products, organizational model, production, cost structure. Products and services represent how each company can fulfil its mission and achieve economic, social and environmental sustainability over time. One of the most important aspects of the value creation process lies precisely in the way the company's supply intersects with its strategy and the way it intends to achieve its goals. Therefore, understanding whether the products and services provided to the market meet the expectations and interests of consumers is one of the key aspects to support the company's long-term development and ensure that strategic thinking, goals, and customer satisfaction are always consistent. Organizational model is described in terms of human resources and operating systems. In terms of human resources, the implementation of personnel training or worker safety measures is an effective way to monitor employee satisfaction and to check the capability to retain employees, thereby ensuring the company's own future value and the basis for going concern. The organizational model is a tool through which the organization can achieve its goals, and human resources are an indispensable part of it (Mintzberg, 1996). One of the most important aspects in the process of corporate value creation is the scale of production of the organization. The key activities for the company's short, medium and long-term strategic success are concentrated in this area. The cost structure of a company is a very important aspect of its corporate model. In crisis situations companies happen to lose control of costs and each

resource becomes an additional opportunity to achieve balance. Therefore it is important to consider KPIs related to the cost structure. These KPIs may be expected signs of imbalance and are consistent with the characteristics of the business and its size.

6. Conclusions

The consequences of the pandemic for companies will focus on their ability to create value, which will put pressure on the effectiveness of their strategies and the stability of their business models. Although there are no regulatory requirements for all companies (especially small and medium-sized enterprises), the pandemic has highlighted the need to introduce new tools, which may be accompanied by more traditional financial statement analysis. The premise of the expansion of the information base is that when calculating the ratio, the company's report contains tailor-made indicators that can effectively summarize its going concern assumptions and avoid data duplication and redundancy, which may hindrance rather than benefit completeness and clarity of information. More traditional financial indicators mainly represent the tangible aspects of the company. They should be accompanied by some KPIs to complete the company's reporting process based on its distinctive characteristics to give visibility to relationship, people, intelligence, structure, and risk components. Therefore, the pandemic crisis has represented a test bed: the importance of management control equipped with a structured financial and non-financial data dashboards has been emphasized. So has been the relevance of knowing how to communicate those information to stakeholders, showing whether the company was sound and capable of responding to macroeconomic and microeconomic issues arising from the extraordinary situation due to pandemic. Continuous communication has helped to achieve higher degrees information symmetry and to keep performance balance. Companies can hopefully capitalize on the lessons learned in order to implement in ordinary times efficient and effective early warning tools in compliance with the Insolvency Directive requirements.

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