TIRESIAS' GIFT OF FORESIGHT: DETECTING FIRMS IN DISTRESS

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Abstract: *The 2020 pandemic has accelerated bankruptcy in economic sectors directly affected by the evolution of prices (the oil industry, transportation, entertainment, the car industry etc). Thus, the number of distressed businesses has grown. The current paper aims to answer the following legitimate questions: what are the methods to early detect distressed businesses, and what are the paths that one can use in order to warn them of imminent distress? According to the European Commission, a company is distressed if, in the absence of State intervention, it will shut down its short-term or middle-term operations. The use of a multitude of definitions for financial distress is explained through the failure to find a measure of enterprise decline. Each country uses different terms to describe insolvency. Still, a model is necessary to improve the accuracy of the prediction. Liquidity flows, profitability and the leverage effect are the most useful indicators to predict a business' insolvency, along with: assessment of accounting documents, liquidity rates, changes in legislation etc. Certain steps have been taken to elaborate some innovative methods based on data and Artificial Intelligence. In the EU, there are three warning tendencies: the extra-judiciary tendency, the mixed tendency and the non-litigious judiciary tendency.*
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Introduction

One of the most significant effects of the 2020 pandemics was the acceleration of bankruptcies in sectors that, through the evolution of prices, seemed to be heading for failure anyway. The oil industry was one of the most notable victims, due to the new technological developments, the disruption of the industry and the shift to cleaner energy in keeping with the Paris Agreement. Other sectors that were particularly affected include transportation, entertainment, the car industry, gambling and retail commerce. Companies that rely on frequent human interactions are the most likely to be caught in a difficult scenario in the next cycle. Consequently, the investors are getting ready for higher unpaid debt rates in 2021. Pictet Asset Management predicts figures between 6% and 7% in Europe and, due to the strong impact on energy companies, between 11% and 13% in the USA (Patel, 2020). This means a growing number of distressed businesses.

This paper aims to answer the following legitimate questions: what are the methods to early detect distressed companies and what are the path to warn companies of imminent distress? From a mythological perspective, the authors are looking for the recipe of Tiresias' gift of foresight; the famous fortune-teller of Thebe, whom Odysseus visited in the land of the dead. We proceed by clarifying the concept of "distressed firm", then focus on symptoms (inferred from the tendency of the liquidities, profitability, the financial leverage effect, monetary payment default, changes in financial profit). We then continue by discussing the ways to signal imminent distress, then draw our conclusions. The data synthetized and analyzed here have been collected from bibliographical sources such as specialized journals, media articles, laws, monographies and specialized websites.

The concept of distressed enterprise

The concept of distressed enterprise plays a key role in initializing reorganization. For a debtor to initiate it, the business has to be distressed or even, in some countries, in imminent or current insolvency. We must not mistake a distressed business for an insolvent one, although differentiating between them is not an easy task. The distress suggests that there is a problem that occurred at a certain moment, while insolvency represents the final stage of persistent distress, the end result of issues unresolved over a longer period of time. "It is also natural that in case of bankruptcy, the contents (the inability to pay outstanding debts) and the moment when this event occurs should be clearly stated (Lukason & Laitinen, 2016). The difficulties could be latent and they can occur insidiously over long periods of time. A company that only faces financial difficulties is still economically viable. Given that it has no cash flows and debts have reached their maturity term and considering the company's viability, liquidation would not be in the best interest of claimants against the company: assets are more valuable if they are kept together as a functional unit than if they were to be sold in parts, since the value of the company increases if it continues its activity.

Consequently, the attitude of EU member states on business insolvency has been transforming over the past four decades. At present, the efforts of most EU states concentrate on saving viable enterprises that are distressed for various reasons: financial, economic, social, legal etc. with a view to maintaining business, keeping workplaces and recovering debts by creditors. The European Commission recommends, in (EU) Directive

2019/1023, a new approach to the matter of insolvent businesses and implementing legislation in the member states that would reflect this approach, allowing the debtor a second chance ("fresh start"). This method to tackle problems businesses struggle with is crucial to an economy that wants to be operational and supports entrepreneurs by encouraging them to take the risks of starting and running a business. But this support ought to be granted only to the honest, good-natured entrepreneur and not the irresponsible or even fraudulent ones. Member states are encouraged to "set up a framework for an effective reorganization of viable firms that are facing financial distress" and to provide "minimal standards on … preventive reorganization frameworks". There is no single definition of "a distressed business", at the level of the European Commission. With reference to guidelines for government support, the European Commission, stipulates that a company is distressed when, in the absence of state intervention, it will have to discontinue short or medium-term activities, as it is unable to sustain it based on its own resources or with the funds it collects from its owner/ stockholders or creditors .

Due to its impact on economy – at micro as well as macroeconomic levels – the topic of financial distress has been widely dealt with in literature. There are a number of situations which can label a business as financially distressed. A business can be distressed, in principle and regardless of its size, if:

a)   A limited liability company, where more than half of its equity has been lost , more than a quarter of which being lost over the last 12 months;

b)   A trading company where at least some of the associates have unlimited liability over the company's liabilities, when more than half of its own capital has been lost (highlighted in the company's accounting documents), more than a quarter of which being lost in the past 12 months, and

c)   If it meets the national criteria for collective insolvency procedures (regardless of the type of company).

Even when none of the above conditions is met, a company can still be considered to be distressed if the usual signs of a distressed enterprise are present, such as: increased loss, decreased turnover, increased inventories, overcapacity, decreasing capital flow, increased debts, increased financial fees and decreased or lost net asset value. Other studies use different indicators to define financial deficit (Lukason & Hoffman, 2014). Some authors believe that a decrease in achievements indicates decline and they use profitability indicators (Barker & Duhaime, 1998) to measure it. Others believe that when a company's cash flow cannot cover current financial obligations with suppliers, employees and financial authorities, this indicates the emergence of problems within the company (Wruck, 1990). In previous specialized literature, the accounting data were used to confirm financial distress, a company's financial condition being either positive or negative. In terms of payment failure, distress emerges when the company has not managed to pay a significant amount of capital or interest to the creditor (Finch, 2009).

The distressed businesses require functional reorganization and major restructuring (Belcher, 1997) in order to revive their activity in the new economic context (under the circumstances when the company's manager has acted good-naturedly but the external circumstances have led to distress) (Hunter, 1997). The use of a multitude of definitions for financial difficulty is explained by the fact that many of the theoretical studies fail to provide a measure that would characterize company decline. (Lukason & Hoffman, 2014) (Argenti, 1976). Some definitions are founded on the final juridical result, such as

liquidation (for Chapter 7 from Insolvency Code of the USA) or reorganization (for Chapter 11 of the same Code). But, as it has been stipulated in Chapter 11, there can be a series of stages the company passes through before its demise: financial difficulty, insolvency and bankruptcy (Wruck, 1990). Therefore, a distressed firm does not implicitly enter liquidation. The difficulty in finding a common language to define insolvency arises from the fact that each country uses different terms to describe it:

- In Germany, it means that the firm is without liquidities or the company's assets do not cover liabilities.

- In Belgium, insolvency means that the firm has stopped paying its debts, (is in staking van betaling/est en état de cessation de paiement), according to article 9 of the Belgian Law of bankruptcy of 1997.

- In Spain, Law no 25/ 28 July 2015 describes insolvency as the impossibility of the debtor (natural or legal entity, business person or consumer, with some exceptions) to pay regularly their chargeable obligations (Anon., 2020).

Early detection/ anticipating distress

Starting from an old precept that says prevention is better than cure , current insolvency legislation deals with prevention methods of insolvency in financially distressed firms. This tendency is defined as "Corporate Rescue Culture". An important condition for a company to be successfully reorganized/ restructured is that rehabilitation measures be taken in due course, before it is too late. For this it is necessary that the distress should not take the debtor by surprise. Basically, all companies require a prophet like Tiresias, who despite his blindness could foresee the future in visions, in the songs of birds or by describing the shapes of the smoke coming from sacrificial fire. Without such fortunetelling skills, the tendency of debtors is to minimize things, and to rely on the fact that recovering will come naturally. To avoid such scenarios the world governments need to provide firms with warning strategies that "warn" debtor as well as authorities of the imminence of distress (see, for example, French and Belgian legislation). Although in the past there have been studies on distress prediction, still a model is required to improve prediction accuracy (Balcaen & Ooghe, 2006). As mentioned above, financial distress passes through several stages (Flagg, et al., 1991), including omission or reduction of dividend payments, inability to pay debts, rescheduling financial obligations, obtaining audit opinions, and bankruptcy. Reviews in specialized literature related to studies on insolvency prediction have indicated that liquidities, profitability and the leverage effect are the most useful indicators to predict firm insolvency (Dimitras, et al., 1996). A company's profile can be determined by a number of indicators that show profitability based on existing resources, e.g. liquidity rates show the ability to pay debts when they are due (Altman, 1968), but also imminent changes in legislation or expiration of contracts or administrative concessions (Castells Llavines, 2016). Also, distress in a firm can be predicted by assessing accounting documents, which can indicate a change in the company's financial profile (Belcher, 1997).

Currently there are concerns to elaborate innovative methods, based on data, which use A.I. (Artificial Intelligence) to detect companies at risk of imminent distress (Anon., 2020). For instance, by analyzing twenty financial indicators (collected in the past four years) with the help of some growth algorithms and SMOTE packaging (synthetic

technique of minority sampling), one can predict the failure of software companies (Roumani, et al., 2020). Warnings on a company's distress in the context of the new economic tendencies can also be inferred through NLP (Natural Language Processing) of data on Social Media (Gifu & Cioca, 2014). It is also notable that in specialized literature is has been claimed that the criteria to label a firm as distressed are far from objective, and they are biased, containing a certain amount of subjectivity (Platt & Platt, 2002).

Warning signs of distress

At present, in the European Union there are three tendencies when it comes to warning means: the extra-judiciary tendency (represented by Early Warning Europe) (Del Rosal, 2019), the mixed tendency (internal and judiciary, developed in France) and the non-litigious judiciary tendency (implemented by Belgium). In what follows we are going to highlight the key characteristics of the three types of mechanisms, starting with the extra-judiciary method. In December 2016, at EU level (where 200,000 firms become insolvent annually) a network-organization called Early Warning Europe was set up which cooperates to implement mechanisms for the early detection, monitoring and assistance of distressed firms, in several first member states: Poland, Spain, Italy and Greece, assisting 3,500 firms between 2017-2019. The success of this organization led other six member states to request this entity's assistance in edifying their own mechanisms of early warning and aid of distressed enterprises: Croatia, Finland, Hungary, Lithuania, Luxemburg and Slovenia (EU Comision, 2021). The mechanism set up by this organization is three-pillared: experts experienced in identifying and diagnosing enterprise distress, reputed businesspersons who voluntarily assist and advise company owners in view of company survival and their return to profit making and, optionally, lawyers specialized in insolvency, when legal measures are required (EU Comision, 2019). This mechanism is inspired by the experience of Denmark which, following extensive changes to Insolvency Law in 2006, set up, in 2007, a system for early detection and consulting of distressed enterprises, meant to assist with their reorganization outside of the judicial system, to ensure they survival (EU Comision, 2019). Other sources of inspiration were systems similar to the Danish one, to spot, consult and aid, developed by Team U (Germany) and Dyzo (Belgium) In order to facilitate restructuring with the highest success rates, countries such as France and Belgium have imagined different ways to monitor firms and warn their managers and, should no measures be taken, to notify government authorities on the distress incurred.

In France, warning takes two main paths: internal and external. Three actors, acting independently, represent the internal path: The internal audit has the main role, with the obligation and the means to inform the enterprise manager , and if the manager does not respond within 15 days, or if the auditor is not satisfied with the received response, the president of the Court of Commerce will be informed (Lienhard, 1996).
- The enterprise committee, with the legal right to control the manager's activity and also has the right to warn – however, without it being an obligation.
- Associates – by approaching the manager and by notifying the internal audit bodies.
- The external path is mainly carried out by the president of the Court of Commerce (Rohard-Messager, 2010) and by the agreed prevention group (Art. L 611-1).

When the group notices the existence of "an indication of difficulty", their obligation is to inform the firm manager but the latter is not obliged to react positively to the resulting warning (L. 611-1 paragraph 3 from the French Commercial Code).

The Commercial Code grants special rights to the president of the Court of Commerce, extending as far as calling on the firm manager to ask for clarifications on the situation of the company (Art. L. 611-2 para 1 "managers can be called upon by the president of the Chamber of Commerce in order to take appropriate measures to remedy the situation") and also, he or she can ask for information from any institution that could provide relevant data on the firm's situation (Art. L 611-2 section I para 2: "the president of the Court can obtain from legal auditors and from representatives of staff, public administration, social security organizations and social workers, as well as of services responsible for centralizing bank risks and monetary default which can provide precise information on the economic and financial situation of the enterprise") .

Chapter I of Title I of Book VI of The French Code of Commerce begins with article L 611-1 which states that "any person registered in the trade and company register or in the occupations registrar, as well as any individual entrepreneur of limited liability and any juridical entity under private law can join a prevention group that is approved by order of the state representative in the region. This group has the mission to offer its members, in full confidence, an analysis of the economic, accounting and financial data which they commit to transmitting regularly. When the group spots signs of distress, they inform the manager and they can suggest expert intervention." (see endnote xiv) . Upon the request of a state representative, authorized administrations assist approved prevention groups which can also benefit from the support of local authorities. Approved prevention groups are authorized to conclude agreements, especially with creditors and insurance companies, that benefit their members. Also, the Bank of France can be required, in keeping with the stipulations of the agreement, to formulate opinions on the financial situation of the firms which are members of prevention groups.

Although the idea is generous and already such groups have been formed in various regions in France, by former workers in the field, now retired (e.g. firm managers, bankers etc), and their activity is confidential, a very small number of firms use it, for fear that associating the company with such an entity could raise suspicions on the financial state of the firm. Basically, identifying distress is done first of all by keeping managers constantly informed on the firm's economic situation. Rigor in financial records and diversity in information sources to the benefit of the firm's management also allow for the early detection of problems. Legal texts also state that a better data distribution of accounting information helps detect risks of non-payment as early on as possible and it allows managers to take the necessary decisions. Art. L 611-2 para. 2 .1 states that "if the managers of a trade company do not submit the annual accounts within the terms stipulated in the enforcable texts, the president of the Court can issue an order so that they should comply on short notice, under sanction" .

Detecting distress requires setting up a procedure to react to the difficulties that can compromise the enterprise's continuity. This is prevention by warning managers (Favario, 2014). The purpose of these procedures is to take into account the proper measures to remedy the situation. The result, in general, consists in concluding amiable agreements, which are great, effective instruments in the service of prevention by detecting business difficulties.

An approach similar to the one in France is seen in the Belgian legislation. Article 84 paragraph (3) of Belgium's Judicial Code   states that each Trade Court organizes one or several chambers of commercial investigation (depending on the size of the jurisdiction). The investigation services which rely first of all on the registry of the Trade Court, ensure the collection and codification of data, and decides on the commercial investigation per se. Commercial investigations are non-litigious procedures, the debtor can only file, at the Court of Cassation, an appeal for abuse of power, based on article 610 in the Belgian judicial Code .

Art.12 LCE establishes the role of the commercial investigation units, which assess the situation of debtors in difficulty, to ensure continuity of business operations and to protect creditors. Unlike French law, the Belgian law also includes the intention to protect creditors, which concerns the investigating judges during the examination of their cases. According to article 12 § 5 LCE the service of commercial investigation also has a mission of economic police. If, during the investigation, the debtor is found to be bankrupt, and meets the liquidation conditions stated in art.182 in the Code of Companies, the file can be sent to the royal prosecutor. Eliminating the obligation to send the file to the Court could promote a climate of trust between the instruction judge and the debtor, and allows them to establish a real collaboration to remedy the financial difficulties of the debtor.

Thus, in the liquid era of the Coronavirus pandemic, Tiresias's gift of foresight can be a priceless treasure. To tell the future of small and medium sized enterprises, people are trying to combine several prediction methods, some involving Artificial Intelligence. These systems of early detection of the enterprises' distress are used by private entities as well as by courts. For now there is a multitude of models. We need a new Odysseus to descend in the Land of the Dead to find Tiresias. We need the spark of a genius! Considering that brilliant minds and a number of working hours are being invested to this end, it is likely that soon there will be a solution … Tiresias shall speak again!

Conclusions

The ambiguity of the terms insolvency and financial distress eliminate the possibility of a unitary definition of a distressed firm. Also, models for the early detection of distressed firms need to be discovered, that offer much more accurate results than those found so far in the specialized literature. It is likely that Artificial Intelligence will offer the support in shaping these detection models. At present, at European level, there are three warning systems of a distressed firm: the extra-judiciary model (Early Warning Europe), the mixed (internal and judiciary, developed in France) and the non-litigious judicial model (of Belgian law).

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