The (Implicit) Dogmas of Business Rescue Culture

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Abstract

In this article,[1] we challenge the (implicit) dogmas of the current trend towards a business rescue culture within Europe.[2] It is unclear why this trend – as a logical consequence of the desire to create increasingly debtor friendly insolvency regimes – keeps revealing and reinforcing itself in this time frame. Many different approaches take this concept for granted. The idea thus risks becoming an end in itself. The assumptions behind the current trend of business rescue culture should reflect the stylized facts of a firm embedded in its business ecology. An implicit dogma of current business rescue culture is that a firm is an entity that must survive and will create value indefinitely and, accordingly, deserves a second chance. However, the ability to create value and therefore the viability of a firm are the outcome of an uncertain economic process. Capitalism is a process of trial and error. Failure is a normal outcome and should be considered an essential part of capitalism. In general, the life span of firms is finite because they have to cope with many uncertainties and trade-offs. The firm itself is only a tiny temporary (legal) shell within a self-organized value chain that continuously reallocates resources as competition intensifies and the rate of innovation accelerates.[3] The implicit assumptions or dogmas of the current business rescue culture contradict the accelerating destructive forces of capitalism and therefore can be labelled as an anachronism. Instead of focusing on the specific micro-level of the firm, insolvency

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2. See, for example, the Draft Directive on preventive restructuring frameworks, second chance, and measures to increase the efficiency of restructuring, insolvency, and discharge procedures COM(2016) 723 Final (22 November 2016).

3. Michael Mauboussin and Alexander Schay, "Innovation and Markets: How Innovation Affects the Investing Process" (Credit Suisse First Boston Corporation, 2000).

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regimes should aim to provide a solution at the higher meso-level.

I. Introduction

There has been critical discussion on whether the business rescue culture is an appropriate tool for insolvent or failing firms.[4] Although, in these papers, references are made to "the economic business life," these references are nonetheless often loose, infrequent, classic, and not general.[5] These contributions rarely consider, among other things, innovation and competition, the value chains in the business ecology, the specific characteristics of knowledge and its fluid nature, and the co-evolution of markets and firms. In other words, the complexity of daily business life. Other factors like firm failure, existence, and sustainable competitive advantage – the stylized facts of a firm in its embedded business ecology – also remain invisible in these discussions.

In this article, we aspire to critically review the business rescue culture by analyzing its manifestations in both theory and practice. In the first part, we look at the reasoning behind the current European proposals regarding business rescue and second chance. This results in a kaleidoscopic picture. It is unclear what business rescue is, what its origins and purposes are, and which methods it embraces. However, the core of this article is about the empirical world of business in general ("the stylized facts") that the current trend towards business rescue strives to address. We confront the assumptions of business rescue with the stylized facts of the business environment and show that the assumptions behind business rescue (labelled as dogmas) are at odds with these stylized facts.

II. The Evolution of the Business Rescue Culture

In the Middle Ages, there were high stigmas and (penal) punishments when entrepreneurs broke promises. Gradually more lenient penalties such as forfeiture of civil or political rights became more common. Central courts then began to

4. See, for example, Australian Productivity Commission, *Business Set-up, Transfer and Closure* (2015), available at: <https://www.pc.gov.au/inquiries/completed/business/report/business.pdf>; Bolanle Adebola, "A Few Shades of Rescue: A Critical Assessment of the Rescue Concept" (2014), available at: <https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2518387>; David Burdette and Paul Omar, "Why Rescue? A Critical Analysis of the Current Approach to Corporate Rescue," in Jan Adriaanse and Jean-Pierre van der Rest (eds), *Turnaround Management and Bankruptcy* (Routledge, 2017) (211–237).

5. See Sarah Paterson, "Rethinking the Role of the Law of Corporate Distress in the Twenty-First Century" (LSE Law, Society and Economy Working Paper No. 27/2014), available at: <https://www.lse.ac.uk/collections/law/wps/WPS2014-27_Paterson.pdf>. Although Paterson asserts that the unifying aim of the law of corporate distress is the facilitation of the reallocation of resources in the economy to best use, no reference is made to the underlying economic process. For an economics-oriented contribution, see Jassmine Girgis, "Corporate Reorganisation and the Economic Theory of the Firm," in Bob Wessels and Paul Omar (eds), *Insolvency and Groups of Companies* (INSOL Europe, 2001) (89–110). Girgis, however, refers to the rather classic static theory of economic organization: the individual firm. Girgis argues that the character of the firm has changed from physical to intangible resources. The question is whether specialized assets need to reside in a particular (insolvent) firm.

acknowledge that debt enforcement should be directed towards the assets of a defaulter and less towards the person. In the Middle Ages, examples can already be found of business rescue arrangements.[6]

Insolvency cannot exist without a world of credit.[7] Increased lending and credit was thus a driver of insolvency regimes.[8] In addition, corporate limited liability implies that in some cases, debts might not be paid. Both insolvency regimes and limited liability recognize that failure and loss of capital are not uncommon.

Sociohistorical, political, and economic factors have continued to shape insolvency regimes more and more towards the rescue culture. In essence, the history of bankruptcy can be described as a development or enlightenment from debtor repression to debtor protection and therefore a redefinition of insolvency from sin to risk, from moral failure to economic failure.[9] Business rescue could thus be seen as a logical extrapolation of this (more debtor friendly) trend. The American approach of business rescue through the introduction of Chapter 11 greatly influenced the subsequent development of business rescue procedures in Europe. Steadily, there can be seen a paradigm shift within Europe in legislative insolvency reforms by moving away from the sacrosanct *pay what you owe* to the balanced promotion of the *continuity of companies in distress*.[10] Boon and Madaus, for example, give an overview of the European efforts to "develop a shared perspective" on rescuing distressed businesses.[11]

What is striking is the diversity of frameworks, principles, recommendations, benchmarks, resolutions, guidelines, recitals, and the diversity of backgrounds.[12] The business rescue idea seems to form the pillar connecting many diverse threads. It is unclear what the meaning and content of constructs like rescue, or temporary insolvency,[13] are.[14] The cumulative impact of these procedures simply expands the definition of what constitutes rescue.[15] This ambiguity means that the business

6. See Dave de Ruysscher, "Business Rescue, Turnaround Management, and the Legal Regime of Default and Insolvency in Western History (Late Middle Ages to Present Day)," in Adriaanse and van der Rest (eds), above note 4 (22–42).

7. Of course, problems are less severe if there is only one creditor; so the focus is on the classical conflict between shareholders and debtholders. This is the standard approach in corporate finance. This approach can be judged a misrepresentation, but it can also serve as a benchmark. Creditors could buy the claims of other debtholders and continue the business. Besides, if conflicts arise between diverse debtholders, the question is why a firm should use multiple creditors with diverse preferences.

8. Resulting in debt that existed long before money, for which see David Graeber, *Debt: The First 5000 Years* (Melville House, 2012).

9. See Catherine Bridge, "Insolvency – A Second Chance? Why Modern Insolvency Laws Seek to Promote Business Rescue" (2013) *Law in Transition* 28.

10. Is insolvency law in search of a new paradigm? Maybe, different conceptions are needed for insolvency law to develop in a way that serves corporate and broader social ends. See, for an elaborate study, Vanessa Finch, *Corporate Insolvency Law: Perspectives and Principles* (Cambridge University Press, 2009).

11. Gert-Jan Boon and Stephan Madaus, "Toward a European Business Rescue Culture," in Adriaanse and van der Rest (eds), above note 4 (238–258), 238.

12. The European Commission Recommendation C (2014) 1500 final of 12 March 2014 on a new approach to business failure and insolvency contains two ideas: entrepreneurial rescue (a second chance for the entrepreneur with a clean slate) or his vehicle: business or corporate rescue. See also the Proposal of the European Parliament and the Council COM(2016) 723 final 2016/0359 (COD) on preventive restructuring frameworks, second chance, and measures to increase the efficiency of restructuring, insolvency and discharge procedures, and amending Directive 2012/30/EU.

13. Or over-leveraged firms. This qualification implies that a firm is viable and valuable.

14. Boon and Madaus, above note 11.

15. Burdette and Omar, above note 4.

rescue idea can be used by many diverse approaches, spreading and reinforcing the trend. The business rescue "principle" is seldom questioned causing the concept to take on a life of its own. Many different justifications for business rescue procedures can be found[16]:

- preserving viable enterprises;
- valuing entrepreneurship and competition;
- reducing the impact of the financial crisis;
- preserving jobs;
- encouraging productivity/entrepreneurship;
- contributing to society;
- protecting a specific industry of strategic importance;
- harmonizing insolvency regulations;
- facilitating risk taking;
- cross-border cooperation;
- promoting financial stability; and
- maintaining the (going concern) value of a business.

Each of these purposes, however, can be questioned. Continuing an insolvent business could hamper competition and is insolvency not simply the result and consequence of competition? Business rescue is thus an indirect way of subsidizing insolvent firms and preventing the inevitable. Preservation of jobs occurs when a company is continued, but at what cost? Keeping a firm in business for employment purposes is neither rational nor a sound economic policy. Harmonization and cooperation have nothing to say about the direction in which innovation insolvency regimes should develop. Valuing entrepreneurship and facilitating risk taking are justified by laying the blame for failure on the experiment (or business model) rather than on the actions of the individual entrepreneur. This optimistic hodgepodge[17] – a recipe for all ailments – makes the dogma behind business rescue culture very attractive.

From these positive justifications, the implicit dogmas of business rescue can be derived. Business rescue focuses on the continuance of the individual firm from a value perspective. The firm is thus seen as the fundamental unit in the quest for value. Failure is seen as abnormal and detrimental to this value creating process. Valuable knowledge is lost when a firm fails; failure of the firm decreases the value of the firm. However, business realities (stylized facts) contradict these implicit dogmas. This will be shown in the next section by reviewing some business realities or stylized facts. These stylized facts originate from an evolutionary-complexity perspective and more closely correspond to business reality. The market is not only an efficiency promoting mechanism but also an effective algorithm in selecting

16. See, for example, Boon and Madaus, above note 11; Burdette and Omar, above note 4; Bridge, above note 9.

17. This approach can be labelled a garbage can model in which problems, solutions, techniques, and preferences circle, and are fluid; solutions are in search of different problems: Michael Cohen, James March, and Johan Olsen, "A Garbage Can Model of Organizational Choice" (1972) 17(1) *Administrative Science Quarterly* 1.

viable firms and their specific knowledge and capabilities. This perspective will shed light on the negative aspects of business rescue.

III. Stylized Facts of the Business Ecosystem[18]

A. Introduction

Insolvency law contains many trade-offs. Frequent references are made to economic consequences of insolvency procedures with regard to the need to preserve value, wealth and employment, and maintenance of innovation and competition. Insolvency law is indeed a complex discipline. This is a reflection of both the complex economy and diverse regulatory environments. But if this representation is either wrong or unclear, business rescue culture is founded on the wrong "assumptions." Ultimately, insolvency law should mitigate conflicts, reduce uncertainty, protect the interests of the legitimate stakeholders of the firm, and create an equal level playing field in which the aim is to increase the returns for creditors as well as clustering and reallocating resources. Contributing to welfare and prosperity is naturally a gigantic challenge. The way we conceptualize the economy influences how insolvency law contributes to that.

It must be kept in mind, however, that the global economy is much more complex than any other physical or social structure ever built by humankind.[19] The economy in general and firms and markets in particular can be considered as complex adaptive systems.[20] These systems describe interacting, information gathering, and adaptive agents generating aggregate behavior. This evolutionary-complexity view, which corresponds to the business reality, is the core of this article.[21] Markets and firms are two interacting, cooperating, and at the same time competing

18. "A stylized fact is a term used in economics to refer to empirical findings that are so consistent (for example, across a wide range of instruments, markets and time periods) that they are accepted as truth. Due to their generality, they are often qualitative": Martin Sewell, "Characterization of Financial Time Series" (UCL Department of Computer Science Research Note RN/11/01, 2011), 2. It is often a broad generalization, which may have inaccuracies in every detail. Sewell uses this technique to give a broad description of market returns. In this article, it is used to give a characterization of themes circling around the business ecology or ecosystem, representing the coevolution of markets and firms. See also James Moore, "Predators and Prey: A New Ecology of Competition" (1993) *Harvard Business Review* 75; James Moore, "The Rise of a New Corporate Form" (1998) *The Washington Quarterly* 167; Marco Iansiti and Roy Levien, "Strategy as Ecology" (2004) *Harvard Business Review* 68.

19. Eric Beinhocker, *The Origin of Wealth: Evolution, Complexity and the Radical Remaking of Economics* (HBR Press, 2007), 6. The Global Competitive Index is made up of 12 pillars of competitiveness with 112 variables, for which see *The Global Competitive Report 2015–2016* (World Economic Forum, 2016).

20. This was already recognized by Adam Smith, the founding father of economics with his central tenets of the invisible hand and unintended consequences. Roger Koppl calls him "a man of system" or a "complexity theorist with a Santa Fe vision": Roger Koppl, "Teaching Complexity: An Austrian Approach," in David Colander (ed), *The Complexity Vision and the Teaching of Economics* (Edward Elgar, 2000), 104.

21. According to Beinhocker, complexity economics is a better approximation of economic reality than traditional economics: Beinhocker, above note 19, Part Two. See also Freek Vermeulen, *Business Exposed: The Naked Truth about What Really Goes On in the World of Business* (Pearson, 2010); William Starbuck, Michael Barnett, and Philippe Baumard, "Payoffs and Pitfalls of Strategic Learning" (2008) 66 *Journal of Economic Behavior & Organization* 7. Other important works in this respect include John Holland, *Hidden Order: How Adaptation Builds Complexity* (Basic Books, 1995); Brian Arthur, "Complexity Economics: A Different Framework for Economic Thought" (SFI Working Paper 2013-04-012, 2013); Ricardo Hausmann *et al.*, *The Atlas of Economic Complexity: Mapping Paths to Prosperity* (Harvard Center for International Development, 2008).

institutions. The distinction between them is fluid, dialectic, and eclectic. Interactions cause the "flow" of knowledge through these institutions, and by these interacting processes, knowledge is used, created, combined, disseminated, valued, and tested.

In the following sections, some stylized business facts of the economy are taken into consideration and lead to the conclusion that business rescue culture in general does not match these stylized facts, is inappropriate, and should be questioned. We do this in steps. First, we demonstrate that interactions and networks are formed within or "form" the economy. The question is therefore whether the firm is the right fundamental entity for an assessment of the business rescue culture. This is exemplified by the fact that the firm is an entity that crystallizes and dissolves. Furthermore, we evaluate whether accelerating movements in the competitive landscape makes business rescue procedures a less effective tool. In addition, we focus on the specific fluid characteristics of knowledge. It is also shown that value creation is highly uncertain: The market is the best way to test and value knowledge instead of this occurring through market interfering insolvency regimes. Finally, these themes are matched with the five dogmas of business rescue culture.

B. Stylized facts of the business ecosystem: complex networks of distributed knowledge

What are the essential determinants of economic prosperity? According to the Economic Complexity Index,[22] the wealth of nations is driven by productive knowledge.[23] The level of productive knowledge is reflected and embodied by the diversity and complexity of a nation's output. Because a nation's output requires capabilities, this output reflects the knowledge embodied in it. Individuals are limited in the things they know. The only way a society can hold more knowledge is by distributing this knowledge widely.[24]

Markets and organizations allow the knowledge that is held by a few to reach many. As Hanauer and Beinhocker state, capitalism as an experimenting economy is not efficient but wasteful. Capitalism's great strength is its creativity that makes it a hugely inefficient and wasteful evolutionary process of trial and error.[25] According to them, capitalism is an evolutionary, problem-solving system (thereby sometimes creating other problems). Wright views capitalism as an "information metatechnology."[26] Ridley sees capitalism as a system of free trade, so that "ideas can have sex."[27] The essence of capitalism is thus creating, using, testing,

22. See Hausmann *et al.*, above note 21. An economy is a system of coordinated distributed knowledge. The essential characteristic of economies is thus not the division of labor but the division of knowledge. See Jason Potts, "Knowledge and Markets" (2001) 11 *Journal of Evolutionary Economics* 413.

23. The idea of viewing an economy as a system of coordinated decentralized knowledge is not new. See Friedrich von Hayek, "The Use of Knowledge in Society" (1945) 35 *American Economic Review* 519. The central problem in this vision is utilizing and expanding the knowledge potential. The Industrial Revolution can be attributed to dense clusters ("chains of inspiration") creating useful knowledge. See Joel Mokyr, *The Lever of Riches: Technological Creativity and Economic Progress* (OUP, 1992).

24. Societies can thus create superhuman results.

25. See Nick Hanauer and Eric Beinhocker, "Capitalism Redefined" (2014) 31 *Democracy Journal* 33.

26. The guiding of Smith's invisible hand needs an invisible brain. See Robert Wright, *Nonzero: The Logic of Human Destiny* (Vintage Books, 2001), 48 and 198.

27. See Matt Ridley, *The Rational Optimist: How Prosperity Evolves* (Fourth Estate, 2010).

disseminating, valuing, and combining information and knowledge and rejecting knowledge that is not considered productive. Markets and firms are two important entwined drivers of this knowledge process. They support the emergent and self-organized value chains.[28]

The economy can be considered a set of arrangements and activities by which a society fulfils its needs.[29] The number of possible recombinations is almost unlimited. The whole chain of interactions transforms and evolves through a process of variation, selection, and amplification. As Schumpeter considers, capitalism is by nature a form or method of economic change. The problem is, however, that this is usually visualized as how capitalism administers existing structures, whereas the relevant problem is how capitalism creates as well as destroys such structures.[30] This process of "Neue Combinationen" is the centerpiece of economics, also called creative destruction.

The firm is only a tiny fraction in a network of technology, capabilities, knowledge, and value. It is therefore not an island.[31] It takes a dazzling number of organizations and exchanges to create computers, televisions, to produce bread,[32] or even a pencil.[33] Emergent and self-organized value chains are complex and continuously reconfigured by entry and exit and also new combinations, divestitures, cosmetic alterations, strategic shifts, breakups, acquisitions, and so on. In this mess, prosperity is made.[34]

According to Foster, modern production systems are bewildering networks ofconnections. Firms, industries, and economies are all involved in producing and exchanging products. They do this in complex and interconnected ways,

28. "Value chain" is a concept from Michael Porter, *The Competitive Advantage: Creating and Sustaining Superior Performance* (Free Press, 1985). Porter's concept is focused on the internal activities but could also embrace external activities. The question is what exactly is connected: It could be knowledge, capabilities, or technologies. See, for an exposition of the way technologies evolve by way of combinatorial evolution of its building blocks, Brian Arthur, *The Nature of Technology, What It Is and How It Evolves* (Penguin, 2009).

29. See Arthur, above note 21, 14.

30. See Joseph Schumpeter, *Capitalism, Socialism and Democracy* (1942) (Harper, 1975 reprint), 82–85.

31. See Håkan Hakansson and Ivan Snehota, "No Business is an Island: The Network Concept of Business Strategy" (1989) 5 *Scandinavian Journal of Management* 187. George Richardson, "The Organisation of Industry" (1972) 82 *The Economic Journal* 883, 883–884, concludes that our "theoretical" firms are islands; looking at industrial reality in terms of the sharp dichotomy between firm and market creates a distorted view of how the system (the complex pattern of cooperation and affiliation) works. A single firm is embedded in a context of many other firms; this entity is exposed to horizontal, vertical, and diagonal forces. This creates unlimited threats and opportunities.

32. This was already noticed by Allyn Young, "Increasing Returns and Economic Progress" (1928) 38 *The Economic Journal* 527, 537: "Notable as has been the increase in the complexity of the apparatus of living, as shown by the increase in the variety of goods offered in consumers' markets, the increase in the diversification of intermediate products and of industries manufacturing special products or groups of products has gone even further." The representative firm loses its identity in these complex, emergent, and self-organized value chains.

33. Leonard Read, "I Pencil: My Family Tree as Told to Leonard Read" (1958) (Foundation of Economic Education, 2008 reprint). The pencil details its complexity of its own creation, listing its components and the numerous people and processes involved.

34. See Dane Stangler and Sam Arbesman, "What Does Fortune 500 Turnover Mean?" (Ewing Marion Kauffman Foundation, 2012), 26.

and thus, the firm is only a very proximate unit of analysis.[35] Wealth creation is the product of a simple, but profoundly powerful, three-step formula being differentiate, select, and amplify. Evolution can be viewed as an algorithm or an all-purpose formula for innovation. Businesses are interactors; they "do the living and dying."[36]

Most firms inhabit ecosystems that extend beyond the boundaries of their own industry or domain. Businesses cannot evolve in a vacuum. They must attract resources of all sorts to create networks[37]; this is what Arthur calls the (usually unrecognized) complex nature of the meso-structure or business ecology.[38] A firm should be considered not as a member of a single industry but as part of a business ecosystem (an extended systems of mutually cooperative and competitive organizations) that traverses a variety of industries. Moore argues that competition is among business ecosystems, not individual companies, that largely provide the fuel for cooperative network creation.[39]

In these self-organized value chains, it is connections that count (and not if these connections are interorganizational or intraorganizational connections). These flows transcend the individual firm. Bundles of resources especially knowledge "flow" through these value chains and are attracted and repelled by firms. Useful knowledge will in general be absorbed by other links in the value chain. These knowledge diffusion and spillovers are the essence of capitalism. Knowledge is a complex and slippery concept as it emerges through interactions and slips away through these same interactions.

C. Some stylized aspects of the firm: an entity that crystallizes and dissolves[40]

In economic theory, the firm and its legal conception is usually considered to be a stylized shell. This tends to obscure and deflect attention from more organic, social processes of enterprising. These processes are much broader than the terrain of

35. See John Foster, "From Simplistic to Complex Systems in Economics" (2005) 29 *Cambridge Journal of Economics* 873. This is the same conclusion as in the evolutionary view that the firm is only an interactor. Luis Araujo, Anna Dubois, and Lars-Erik Gadde, "The Multiple Boundaries of the Firm" (2003) 40 *Journal of Management Studies* 1255, 1270, draw the same conclusion: "Pattern of connections drives the development of capabilities, neither firms nor capabilities should be seen as discrete entities and interaction amongst capabilities within as well as across firm boundaries become central."

36. An interactor is a design that has been rendered from the possible designs and made real: Beinhocker, above note 19, 11, 195, and 200. For a more elaborate view, see Geoffrey Hodgson and Thorbjørn Knudsen, "The Firm as an Interactor: Firms as Vehicles for Habits and Routines" (2004) 14 *Journal of Evolutionary Economics* 281. The central question is: What is the basic or fundamental unit of selection?

37. For example, Microsoft's ecosystems contain some 7752 system integrators: Iansiti and Levien, above note 18.

38. See Arthur, above note 21, 16.

39. See Moore, "Predators and Prey," above note 18.

40. There are many views on the firm, often dialectic and eclectic, because of the diverse multileveled connections between firms and markets: The firm is an agent acting on markets, is enabled and constrained or disciplined by markets, creates markets, is an alternative for markets, searches for opportunities in markets, and can be traded on markets. A firm supersedes a market and is superseded by markets: Tim Verdoes and Anthon Verweij, "A Critical Consideration of the Corporate Rescue Culture: An Analysis from the Perspective of Complexity Economics," in R. Parry (ed), *Designing Insolvency Systems* (INSOL Europe, 2015) (73–90), 74. This theoretical diversity resembles the complexity of the firm. The theories of the firm contain a nested hierarchy of interconnected multileveled ideas and assumptions: Paul Nightingale, "Meta-paradigm Change and the Theory of the Firm" (2008) 17 *Industrial and Corporate Change* 533. This complex network of interconnected assumptions is in itself a complex adaptive system representing a "theoretical" business ecology.

legally defined "firms" and business enterprises that only weakly reflect them. The firm should be viewed as a temporary coalition in order to obtain insights into the dynamics of her crystallization and dissolution. It is necessary to get beneath the stylized fact of the firm as a legal entity that has preoccupied economic theory. Corporations are also nothing more than temporary coalitions of strategic decision-makers who assemble and disassemble structures of subsidiaries, associates, strategic alliances, and joint ventures for the purposes of wealth creation. The firm is temporary in the sense that business opportunities are time and place specific. Firms' linkages and markets simply wax and wane.[41]

The theories of the firm,[42] business or management studies, strategy, and marketing, and its legal conception are preoccupied with the more or less static, efficient, equilibrium entity.[43] Success, growth, and survival of the firm and its sustainable competitive advantages are taken for granted or considered to be the normal outcome. However, a firm is not an efficient outcome but the outcome of an effective and efficient (evolutionary) market algorithm. This follows the dynamic complexity view of economics that considers the many interactions in an economy. The market can be considered a network of capabilities. The difference between the market and the firm is and always has been fluid.[44]

Both the legal conception and economic theory of the firm share the underlying premise of the firm. Enduring success is (implicitly) assumed to be normal. However, failure or more generally disappearance is more normal than success. In fact, success and enduring sustainability are abnormal. The tendency to overemphasize successes[45] and to rationalize them *ex post*[46] is chronically endemic. In essence, the overuse of the survivor technique distorts our understanding of the process that has led to the present state of things and has affected several disciplines besides business history. The thinking that many of the firms that now dominate the economy are of ancient lineage or that some of today's top firms were also at the top a century

41. See Michael Taylor, "The Firm as a Connected, Temporary Coalition" (2004/05) *Spaces*.

42. The theories of the firm are centered around the following three questions: why do firms exist? what are its boundaries? and what is its internal organization? These theories are more or less focused on the equilibrium position. Some of these theories explain the existence as "organizational successes while others explain it in terms of market failures": Nightingale, above note 40, 560. The existence of the firm is a central starting point. In general, the theories of the firm fail to incorporate *how* firms arise, exist, change, and fail. It could even be argued that firms do not really exist in these theories but only the underlying foundations: transactions, resources, knowledge, and capabilities. It is also possible to explain the emergence of the firm (in general) in terms of ideas or memes: John Weeks and Charles Galunic, "A Theory of the Cultural Evolution of the Firm: The Intra-organizational Ecology of Memes" (2003) 24 *Organization Studies* 1309.

43. A problem of this transaction cost approach is the focus on the "tasks of coordination, and that what is being coordinated (i.e. productive knowledge) is independent of organizational arrangements": Araujo *et al.*, above note 35. It is about rationalizing – making efficient – the system, not what makes the system valuable. Business model considerations – how do businesses create, deliver, and capture value – do not show up. This resembles Drucker's famous quote that "there is nothing so useless as doing efficiently that which should not be done at all." Thus, it is useless to efficiently determine the boundaries of a firm when the comprised activities do not create value.

44. The market and the firm are two extremes on a coordinating continuum; there are many intermediate hybrid forms of coordination.

45. Microsoft epitomizes the rational, calculating strategy of success. However, its success was far more the result of a series of accidents than of a far-sighted, planned strategy; see Paul Ormerod, *Why Most Things Fail: Evolution, Extinction and Economics* (Wiley & Sons, 2005).

46. See Philip Rosenzweig, *The Halo Effect: … and the Eight Other Business Delusions That Deceive Managers* (Free Press, 2014).

earlier might lead to the assumption that giant firms are generally long-lasting. Yet the stated observation is equally compatible with the hypothesis that some initially small firms grow rapidly to become large, while corporate giants have in the end a poor survival rate:

> Our current knowledge of survivors dominates our impression of the typical experience, and their triumphs are lionized, while the history of the failures is forgotten or considered untypical.[47]

According to Popper, failure is the norm of science. The truth of knowledge cannot be proven and can therefore only be falsified. Failure is the way science progresses.[48] It is the single most important feature that all biological species share. In fact, almost all species that have ever lived are now extinct. Economic theory is too preoccupied with existence, rise, and success at the expense of addressing death, decline, and failure.[49] The main reason for business failure is that the world is complex and in general unpredictable.[50] It is like playing a game of chess when the rules of the game change continuously, the players are unknown, and there is no clear definition of winning. In other words, an infinite game. Businesses have a disadvantage because the portfolio and diversity of their business plans can never be as large as contained in the market.[51]

On average, around 10% of all enterprises in the USA and Europe vanish yearly.[52] Daepp and others found that the half-life of more than 25 000 publicly traded North American companies was 10 years. Every 10 years, 50% of these companies vanished.[53] Stubbart and Knight challenge the meta-theory about success and failure: Success is considered to be the "correct outcome."[54] When a firm

47. See Leslie Hannah, "Marshall's 'Trees' and the Global 'Forest': Were 'Giant Redwoods' Different?," in Naomi Lamoreaux, Daniel Raff, and Peter Temin (eds), *Learning by Doing in Markets, Firms, and Countries* (University of Chicago Press, 1999) (253–294), 254–255.

48. "The failure rate of organisations may not be an indication of system failure but of system success – just as an abundance of refutations may be a sign of rapid scientific progress.": Richard Langlois, *Economics as a Process* (Cambridge University Press, 1986), 56. "The enormous turnover in business activity is a (healthy) sign of a restless capitalism": Stan Metcalfe, "Restless Capitalism" (Momigliano Lecture, Rome) (2004), 188.

49. For this asymmetry, see Ormerod, above note 45.

50. There are severe limits of knowledge: "Firms have very limited capacities to acquire knowledge about the true impact of their strategies": Paul Ormerod and Bridget Rosewell, "How Much Can a Firm Know?" (Volterra Consulting Ltd, 2004), 2; Starbuck *et al.*, above note 21, concluding that strategic learning is harmful as often as it is helpful. The future is created by many interactions with many unintended consequences.

51. "The world is too complex, the permutations too many, for any single company to envision definitively the transformations to come": Moore, "Corporate Form," above note 18, 180.

52. See Ormerod, above note 45, 15, referring to the Business Statistics of the American Advocacy Database and the Business Demography Statistics of Eurostat, available at: <http://ec.europa.eu/eurostat/statistics-explained/index.php/Business_demography_statistics> reporting a percentage of 8.7%. Failure of firms is not a new and recent phenomenon: R. Hutchinson, A. Hutchinson, and Mabel Newcomer, "A Study in Business Mortality: Length of Life of Business Enterprises in Poughkeepsie, New York, 1843–1936" (1938) 28 *American Economic Review* 497, who found that only one-fifth of business enterprises survived the 10 years and less than half of these enterprises survive for another 10 years. "This high mortality rate of business has long been recognized as one of the costs of a system of free competition." "Some of these failures have been used as stepping stones to larger enterprises."

53. See Madeleine Daepp *et al.*, "The Mortality of Companies" (2015) 12 *Journal of the Royal Society Interface* 1.

54. See Charles Stubbart and Michael Knight, "The Case of the Disappearing Firms: Empirical Evidence and Implications" (2006) 27 *Journal of Organizational Behavior* 79.

disappears, scholars, managers, owners (and lawyers and policymakers) ask: "what went wrong." Failure is considered to be anecdotal evidence of aberrations, blunders, and other mistakes. However, failure is quite normal. The average life span of organizations tends to be short. Meta-analysis has revealed that long-term survival is a random outcome or an unattainable goal. Wiggins and Ruefli conclude that "sustainable"[55] competitive advantage and superior performance are very rare. Firms with long enduring competitive advantage are statistical outliers.[56] Usually, outliers are viewed as a problem and discarded, because they distort variances and central tendencies,[57] but in case of business performance, they are seen as the correct outcome. Disappearance occurs frequently, even where brand names, assets, and operations superficially continue unchanged.[58]

These findings are consistent with the vision of an environment full of uncertainties. An environment where long-term survival is simply problematic. Long-term survival can be considered as a purely random outcome, due to the result of interactions among many competing organizations.[59] Performance and survival of a firm are systemic and emergent outcomes. Success and failure depend on the complex interdependencies and interactions among many firms and markets. There are severe limitations to what extent a firm can know the effects of its strategies.[60]

Greenwood and Suddaby have commented on the findings of Stubbart and Knight.[61] Some firms do survive for long periods. They have succeeded in transforming their business model. The examples are numerous: Abercrombie and Fitch transformed itself from selling guns to upscale casual wear for young consumers, while Nokia transformed from a wood pulp producer into a producer of mobile phones. It is doubtful whether these transformations were fully and deliberately planned in the strategic boardroom.[62] It rather emerged from trying, acquiring, and introducing new things. Many of these attempts resulted in failure.

55. David Sirmon *et al.*, "The Dynamic Interplay of Capability Strengths and Weaknesses: Investigating the Bases of Temporary Competitive Advantage" (2010) 31 *Strategic Management Journal* 1386, conclude that even "achieving temporary (instead of sustainable, TV/AV) advantage is more difficult than previously thought."

56. Robert Wiggins and Timothy Ruefli, "Sustained Competitive Advantage: Temporal Dynamics and the Incidence and Persistence of Superior Economic Performance" (2002) 13 *Organization Science* 82. This phenomenon: a few exceptional performing firms can be represented by a power law: Pierpaolo Andriani and Bill McKelvey, "From Gaussian to Paretian Thinking: Causes and Implications of Power Laws in Organizations" (2009) 20 *Organization Science* 1053. Richard Foster and Sarah Kaplan, *Creative Destruction, Why Companies That Are Built to Last Underperform the Market – and How to Successfully Transform Them* (Currency, 2001), 9, conclude the same: "the golden company that continually performs better than the markets, has never existed."

57. Stubbart and Knight, above note 54, 96.

58. There are different labels for defining and quantifying the contraction of the number of firms: "death," "mortality," and "disappearance." The overall meaning of these labels is that the basic identity has been lost – the (legal) independent entity does not exist anymore. We prefer dissolve and crystallize because knowledge, capabilities, and business modules are continuously reshuffled and reconfigured along the value chains. Valuable modules will therefore in general be absorbed by the market.

59. Stubbart and Knight, above note 54, 89, 91, and 98.

60. Ormerod and Rosewell, above note 50, 2.

61. See Royston Greenwood and Roy Suddaby, "The Case of Disappearing Firms: Death or Deliverance?" (2006) 27 *Journal of Organizational Behavior* 101.

62. Nassim Taleb, *Anti Fragile – Things That Gain from Disorder* (Penguin, 2012), Chapter 15.

Change is no guarantee of success.[63] This raises the question if an established business is the optimal and appropriate mechanism to transform into other lines of businesses. The dynamic or organizational capability approach seems to hint that this is possible when companies are equipped with the right competences. Dynamic capabilities can be a partial hedge against obsolescence. Sometimes, however, "ad hoc problem solving" by the firm is the better strategy. Besides, organizational capabilities – to sustain the peculiarities of the firm – contain their own problems of infinite regress and discontinuity.[64]

A more fundamental question is thus, why should a firm live forever? In a way, a firm can be considered a tool, a machine that eventually is worn out. Organizations ought to last only until their functional utility is exhausted. This vision is precisely how business corporations were originally conceived: Most corporate charters were granted not only for a limited period but also for narrowly specified purposes.[65] This resembles the limited time span of a business model. The emergence of these mechanisms means that exit strategies are created. The question whether a company should continue its business was seriously investigated in the past. In essence, the limited time span of corporations was acknowledged.[66] This recognizes "the best or longest is the enemy of the good."

Transforming a business means trying new things to leverage and prolong existing assets. This is a kind of diversification and could be detrimental for investors. Firms should focus and specialize because investors can more easily diversify and mitigate their risks. This "stick to your business" is compatible with the vision that discontinuity of firms creates the most value and not continuity.[67] Creative destruction leads to value creation. Starting or reconfiguring new business models can sometimes be better done with a clean slate, freed from its yoke. The costs of switching and turnaround/rescuing could be very high and detrimental for complementary (existing) assets. The policy of keeping the corporation alive and thriving at all costs under all circumstances can be questioned.[68] Maintaining the status quo (and failure) could be an optimal policy.

Likewise, the same question can be posed if business rescue procedures should rescue viable businesses. Creating new options can destroy the value of existing, complementary assets. The costs of creating flexible options to cope with decline and future threats could be very high and may undermine the present business model that still generates positive cash flows. Keeping companies resilient or

63. And if a firm is successful, this does not mean that the firm knows why it is so. Vermeulen, above note 21, 176, stresses the causal ambiguity that makes firms successful: "The firm's competitive advantage is difficult to imitate because the firm itself doesn't quite know what it does to be so good at it …"

64. See David Collis, "How Valuable Are Organizational Capabilities?" (1994) 15 *Strategic Management Journal* 143; Sidney Winter, "Understanding Dynamic Capabilities" (2003) 24 *Strategic Management Journal* 991.

65. "So, for example, when the Hudson's Bay Co. was merged with the Northwest Fur Company in 1821, the charter limited its 'life' to 21 years.": Greenwood and Suddaby, above note 61, 106.

66. See Greenwood and Suddaby, above note 61; Henry Hansmann, Reinier Kraakman, and Richard Squire, "Law and the Rise of the Firm" (2005) 119 *Harvard Law Review* 1335.

67. See Foster and Kaplan, above note 56.

68. See Nicholas Dew, Brent Goldfarb, and Saras Sarasvathy, "Optimal Inertia: When Organizations Should Fail" (2006) 23 *Advances in Strategic Management* 73.

rescuing insolvent and/or financially distressed businesses is therefore problematic policies.[69] Baldwin and Clark assert that capabilities are expensive, complex, and risky investments. Although it is tempting to try to improve on all dimensions at once, to do so is to invite disaster. Many restructurings, recapitalizations, and hostile takeovers are directed at reversing investments in capabilities that outside investors view as beyond the company's capacity to implement.[70] In our time frame due to the acceleration of innovation and the combinatorial explosion of ideas, long-term viability is highly uncertain; future cash flows could be – due to the many future threats – too low and risky to justify the enormous investments to cope with these uncertainties.

Our main conclusion is that dissolution of a firm and crystallization of other firms/businesses and the resulting diffusion of knowledge are much more structural than assumed. Businesses and competitive advantage are temporary and changed, failed, and dissolved businesses are the essence of capitalism and should be considered reasons for not interfering and facilitating business rescue. The firm is merely a fluid membrane of pooled and clustered resources with dense interactions – a vehicle or interactor shielded by corporate law.[71] Thus, the firm is not the fundamental unit or unit of selection. Schumpeter poses that every enterprise is threatened and put on the defensive as soon as it comes into existence.[72] Disappearance is therefore a normal, necessary, and inevitable consequence that in principle should not be countered by active business rescue procedures.

D. Stylized facts of competition and innovation: increasing intensity and rate of acceleration

It is recognized that firms are facing an increasingly complex and uncertain environment because of intensified competition and the accelerating rate of innovation.[73] The "triumph of bits," the "age of modularity," and the "digital convergence" open almost unlimited opportunities (and thus more threats),[74] because knowledge can easily be copied, communicated, connected, coordinated, combined, and competed with (through experimentation and innovation). More software building blocks lead to bullish imaginable software combinations and business opportunities of which the vast majority is useless. The chances that knowledge will eventually be undermined by future developments will be higher and higher.

This trend of intensified competition and/or accelerated rate of innovation is revealed in different disguises, for example:

69. Also, because there are other problems involved with this kind of "market interference" (see last section).
70. Carliss Baldwin and Kim Clark, "Capabilities and Capital Investment: New Perspectives on Capital Budgeting" (1992) 5 *Journal of Applied Corporate Finance* 67, 80.
71. These boundaries provide buffering and bridging functions; see Araujo *et al.*, above note 35, 1257.
72. See Schumpeter, above note 30, 105.
73. See Martin Reeves, Simon Levin, and Daichi Ueda, "The Biology of Corporate Survival" (2016) *Harvard Business Review* 3.
74. See Carliss Baldwin and Kim Clark, "Managing in the Age of Modularity" (1997) *Harvard Business Review* 84.

- the expected life span of firms is decreasing[75];
- there has been a rise in firm-level volatility[76];
- the length of Schumpeter's waves, product life cycles, competitive advantage periods, and corporate longevity declines[77];
- a secular rise in annual turnover in the Fortune 500 companies[78];
- an increased delisting of companies[79]; and
- the increased pressure of capital markets to focus on short-term performance.[80]

The future existence of the firm is neither a given nor is it self-evident. Rescuing a firm is troublesome because we cannot be certain if a company will be viable after a rescue attempt. The acceleration of changes will result in an even higher percentage of business failure recidivism. Business rescue has to cope with the statistical problem of type I and type II mistakes: selecting the wrong type of financially distressed businesses. The hypothesis being tested is that the firm is viable. Type I error occurs when this hypothesis is incorrectly rejected. A type II error occurs when this hypothesis is incorrectly retained. As innovations accelerate and competition intensifies, the chances that an insolvent business is viable will diminish. Type II errors will occur more often in an accelerating economy. The statistical chance that the business model has become obsolete or is outdated will be higher thus continuing a business will, more often than not, destroy value. In general, the costs of business rescue will rise, the risks will increase, and the benefits will fall. Business rescue culture contradicts this development.

E. Stylized aspects of knowledge: non-rivalry and non-excludability

Marshall recognized that knowledge is our most powerful engine of production.[81] Knowledge is clustered in (dense as well as loose organized) networks. Viewed from the network or society, it is not important where the knowledge resides. Capitalism is a mechanism that utilizes and expands the knowledge potential. This happens in the interplay between the firm and the market and the networks they embody. Knowledge is very fluid and usually crosses the membranes of businesses easily. Capturing or expropriating the value of knowledge means revealing it.

Knowledge has ever been an important element in business life, but nowadays, its importance is more explicit. It is considered to be the most important kind of a firm's assets.[82] Knowledge or software is

75. See Foster and Kaplan, above note 56.
76. See Diego Comin and Thomas Philippon, "The Rise in Firm-level Volatility: Causes and Consequences" (2006) 20 *National Bureau of Economic Research Macroeconomics Annual 2005* 167. They also found that the aggregate volatility declined.
77. See Mauboussin and Schay, above note 3.
78. See Stangler and Arbesman, above note 34, 26.
79. See Reeves *et al.*, above note 73.
80. See Andrew Haldane, "Patience and Finance" (Speech at the Oxford China Business Forum, Beijing, 9 September 2010).
81. See Alfred Marshall, *Principles of Economics* (Macmillan, 1920), IV.1.2, available at:<http://www.econlib.org/library/Marshall/marPCover.html>.
82. See Paul Romer, "The Soft Revolution: Achieving Growth by Managing Intangibles," in John Hand and Baruch Lev (eds), *Intangible Assets: Values, Measures and Risks* (OUP, 2003) (63–94).

> a set of instructions, recipes, means or processes by which humans manipulate the physical world around them – to rearrange those resources – in order to create value.[83]

Knowledge is a complex and slippery concept because of its interactions and the fact that it slips away. It is therefore in a state of constant flux. Knowledge is a resource with special characteristics: It is mostly non-rival, non-excludable, and therefore expandable or scalable. Petrol can be used once, but knowledge can be used as often as needed.[84] Therefore, knowledge is not a scarce resource. It offers unlimited possibilities. Everybody can use it, because in most cases, others can copy it. Knowledge can be integrated and combined with other knowledge, therefore becoming expandable and scalable.

When a business tries to capture the value of an idea, this knowledge will be revealed and – if valuable and useful – it will be noticed by others. Useful knowledge does not stay within the boundaries of the company, but it flows out and in and is used, created, transformed, and imitated. Because of "digital convergence" and the lower costs of transmitting knowledge, the scalability of knowledge has increased enormously. This also means that the threats and the chances that knowledge will be undermined, surpassed, or superseded will increase. As Collis asserts, organizational capabilities (embodied knowledge) are vulnerable to threats of erosion, substitution, and above all to being superseded by a higher-order capability of the "learning to learn" variety.[85] Because of acceleration, the chances that knowledge is "obsolete" will thus increase and the value potential of insolvent firms will decrease.

Does an insolvent business contain valuable and or useful knowledge? In general, the odds of it containing valuable knowledge are low. This is the reason for its failure. The critical resources are often embodied in labor. Because of the digital revolution, this knowledge is fluid and slippery and can be integrated in other alternatives. In fact, often the best (critical) alienable resource is usually the first to leave the company.[86] This flow of knowledge (also of failed firms) is the essence of the economy. It could be that the business owns intellectual property, but does it have value, can it be internally expropriated (in the insolvent firm), and does it have external value?

It is possible that certain knowledge modules are valuable. But do we need to capture the value of it in the temporary shell of the firm or can it be applied in other directions? If knowledge does have value, why does it have to stick to the specific (failed) business? As Baird and Rasmussen state, many assets work equally as well in one firm as another. In addition, assets that are tailored to a specific firm may not represent a source of value but could be the source of failure.[87] Besides,

83. See Michael Mauboussin, Alexander Schay, and Stephen Kawaja, "The Triumph of Bits" (Credit Suisse First Boston Corporation, 1992), 2.
84. Most knowledge or business models (of the capturing value type) cannot be qualified as intellectual property.
85. See Collis, above note 64, 143.
86. See Raghuram Rajan and Luigi Zingales, "The Influence of the Financial Revolution on the Nature of Firms" (CRSP Working Paper No. 525, 2001), available at: <https://ssrn.com/abstract=259537>.
87. See Douglas Baird and Robert Rasmussen, "The End of Bankruptcy" (2003) 55 *Stanford Law Review* 751, 768.

there are serious obstacles to capturing its value. Usually the risks and uncertainties of capturing the value are high for insolvent firms. Stakeholders hesitate to continue a business because the present value of a new business turnaround strategy is unknown in general but even more unknown and uncertain in case of an insolvent business. Stakeholders could be more or less forced to join the rescue, even in case of a low chance of success. This creates the wrong incentives. In fact, it distorts the competitive process because indirectly failed firms are subsidized. Firms can thus free ride with other people's money. This can in turn increase the *ex ante* financing costs in general if *ex post* investors are forced to continue the business.

Is (valuable) knowledge wasted if it is not used (captured) in the failed firm? Again, the answer is no. Useful knowledge will in general be absorbed by the market and settles down elsewhere in the value chain. Progress is not only fuelled by successful but also by unsuccessful ventures. Failure is wasteful; however, there are economic benefits to offset the waste if the resources of the failed firms are reallocated in the value chain. Failure – as the inevitable outcome of many trial and error attempts – is beneficial in three ways[88]: the selection effect (survivors of a larger pool of entrants perform better), the competition effect (a larger pool of entrants is a greater stimulus to innovation), and the spillover effect (knowledge no longer appropriable by the failed firm may be captured by survivors' firms from spillovers). Valuable knowledge is not usually lost.

Failure is good! Failed entrepreneurs may be as heroic as successful entrepreneurs may.[89] Although stickiness owing to embeddedness is sometimes an impediment of diffusion of knowledge, firms provide benefits to society that outlast their existence. Governments should encourage innovation (start-ups), and successful firms should actively incorporate resources of failed or failing companies in the sources of innovations from which they draw. Integrating and combining knowledge flows from failed firms increases the performance and adaptability of firms in a distributed knowledge system. Useful knowledge is not lost or as Hoetker and Agarwal state that death hurts, but it is not fatal.[90] Useful and valuable knowledge will be noticed and absorbed by the market. With or without insolvency.

F. Stylized aspects of value and viability: (reversed) causality

Capitalism is a system or mechanism to test and value knowledge and information. There are serious problems in this wealth creating process. This is better known as the information paradox.[91] This paradox arises in case of selling and buying business ideas. What is the value of a business idea? The problem is that its (present) value can never be known in advance. If it is certain, why was this not discovered

88. See Anne Knott and Hart Posen, "Is Failure Good?" (2005) 26 *Strategic Management Journal* 617, 617–618.
89. Ibid., 617.
90. See Glenn Hoetker and Rajshree Agarwal, "Death Isn't Fatal: The Postexit Diffusion of Knowledge Created by Innovative Companies" (2007) 50 *Academy of Management Journal* 446.
91. See Kenneth Arrow, "Economic Welfare and the Allocation of Resources for Invention," in National Bureau of Economic Research, *The Rate and Direction of Inventive Activity: Economic and Social Factors* (Princeton University Press, 1962) (609–629).

by someone else? Besides, the future is unknown as it is created and shaped by the actions of many others. For valuing and selling an idea, the owner of that idea has to inform and disclose it to an interested party. But the other party then immediately "owns" this idea. It has been acquired without costs.

The only way to capture the value of this idea is for its owner to execute the plan and become an entrepreneur. A market has to be created to test and value the idea.[92] Because the idea has to be specific and distinctive, the required investment is (partly) irreversible. The entrepreneur thus becomes immobile. Suffering losses in case of failure is a logical consequence of this value creating process. To be successful, the idea has to be revealed in an indirect way, which at the same time undermines it. Capturing the value of an idea has the unintended consequence of revealing and disseminating it. Success attracts other players. This knowledge progression process – through success and failure – is the unintended consequence of entrepreneurial activity.

Suffering losses in case of failure is a natural and normal consequence of the quest for value. Failure has many different disguises. Yet not all failures are lethal. Business failure is associated with loss of value when the firm is liquidated, and the synergy between the assets (the organizational capabilities) vanishes, resulting in an assumed decline of value. But the question is whether this loss of value can be attributed to bankruptcy and liquidation. There is a reciprocal relationship between the viability and the value of a business. A viable business continues operations, which means that the assets can be valued at going concern value. Thus, viability influences value. But, on the other hand, if a company creates value, then it is also viable. So value creation influences viability. This is the reversed causality.

The market value of the firm usually deviates from the going concern or book value.[93] This is usually recognized, especially in cases when the market value is higher than the book value. The reason for this deviation is that, because of strict accounting criteria, a balance sheet usually does not recognize intangible assets. This deviation is recognized explicitly in cases of mergers and acquisitions. At that specific moment, the market value reveals itself, but that does not mean that there was no difference at an earlier moment. However, the market value can also be lower than the going concern or book value in case of bad prospects and underperforming expectations. This lower value is revealed in case of insolvency, but it is wrong to attribute this to liquidation. Usually, the market value has already gradually declined when a firm traversed its own downward spiral. It is not bankruptcy that destroys value, but destruction of value that results in bankruptcy.

92. This could be the essence as well as the nature of the firm: "The main problem (of explaining the crystallization of the firm) is far deeper and arises from the fact that the net present value of an idea, asset, or capability (advantage), cannot be known without factoring in the very planned and emergent actions of a firm and the impact of these on the eventual value of the advantage, and the way in which this value is being affected/transformed as a result of the actions of other market players, to include new entrants-competitors, supplies and buyers leading to the co-creation of additional value": Christos Pitelis and David Teece, "The (New) Nature and Essence of the Firm" (2009) 6 *European Management Review* 5, 10.

93. For a listed company, this difference is visible: It is the market capitalization minus the book value of equity.

Creative destruction does not mean destruction of value. Value is created by undermining structures.

This causality can be elucidated by referring to the recovery ratio in case of a bankrupt firm. In the Netherlands, the overall recovery ratio is 3.2%.[94] Is this low recovery ratio a sign of high bankruptcy costs? Markets are extremely inefficient if this is the case. How can it be possible that no one is able to sustain the value, assuming that there is value? The difference is simply too big for a market inefficiency argument. But there is another explanation: The value has already been lost in sight of insolvency. The low recovery ratio is a reflection of the fact that the market value is low. This argument does not require a market inefficiency argument. The low and declining value caused bankruptcy, not the other way around.

Another illustrative aspect is the low percentage of restarted businesses, currently 2.5% in the Netherlands.[95] This could have been caused by market failures as the market is not capable of capturing the value; this would (again) require a very inefficient market. On the other hand, it is also possible that there is no wealth creating future for the firm. That means that insolvent firms are not viable. In the USA, the percentage of restarted businesses is higher at 10%. Thus, it appears that more debtor friendly insolvency proceedings save more value.

Comparison of these percentages – which is what economists and regulators usually do – is not, however, appropriate, because it does not take the other financial institutions of a country into account. In the Netherlands, for example, small- and medium-sized firms rely heavily on bank credit. Banks therefore possibly filter out poorly performing firms at an earlier state, so only the least promising firms go bankrupt. In addition, restarted businesses have a high chance of recidivism,[96] which implies that these insolvent firms had no promising future prospects. If the insolvent firm has value, in most cases, this value is not lost but reallocated. With a more debtor friendly insolvency procedure, more businesses will be given the benefit of the doubt.[97] Policymakers should not sustain and indirectly subsidize the old but stimulate the new.

Besides, usually the rescue process requires some form of business valuation. However, valuing is very subjective. The firm is a link in the value chain created by many interactions; the (firm) value it creates can only be known *ex post* (and in that case only partly and for a certain period). The viability of the firm can only

94. See Centraal Bureau Statistiek, "Faillissementen, Oorzaken en Schulden 2015" [Central Bureau of Statistics, "Bankruptcies; Causes and Debt 2015"]. This percentage is much lower than the 89.3% in the Resolving Insolvency Section of the World Bank's Doing Business Report, available at:<http://www.doingbusiness.org/data/exploretopics/resolving-insolvency>.

95. See Centraal Planbureau, "In vier stappen naar efficiëntere faillissementswetgeving" [Economic Policy Analysis, "Four steps to improve the efficiency of insolvency regulations"] (2017).

96. Continuation of failed business shows high rates of failure recidivism: Out of debtors that emerge as continuing, independent entities under Chapter 11, 18.25% ultimately file for bankruptcy protection again: Edward Altman and Ben Branch, "The Bankruptcy System's Chapter 22 Recidivism Problem: How Serious Is It?" (2015) 50 *The Financial Review* 1.

97. The Dutch Council of State W03.14.0221/II Report (2015) raised serious objections to the Dutch Insolvency Modification (introducing a prepack arrangement). The Council concluded that viability and value are concepts that are unknown and too subjective.

be tested via markets. The essence of value creation is that it cannot be predicted, if this is possible it cannot be created anymore! The business rescue process becomes very subjective and manipulative,[98] compared with the "old" more creditor-based system:

> At best, the valuation of an enterprise (…) is an exercise in educated guesswork. At worst it is not much more than crystal ball gazing. There are too many variables, too many moving pieces in the calculation of value (…) for the court to have great confidence that the result of the process will prove accurate in the future.[99]

IV. The (Implicit) Dogmas of Business Rescue Culture

In this article, the central focus is on the meso-structure level and not the microeconomic perspective of the firm because the firm is not the fundamental unit in the wealth creating process. Insolvency regimes should focus on this general meso-economic landscape and create a neutral equal competitive playing field. In this aggregate spectrum, it does not matter where the knowledge resides, rather that it should flow, if necessary, to better opportunities. This happens with knowledge of both solvent and insolvent firms. We should not focus on the entities but on the connections between the elements: the value chains.

Business rescue procedures introduce many additional questions: What is it exactly; what are its purposes; does it apply to a business, corporation, or an entrepreneur; which methods does it include; what is a viable, and valuable firm; is restructuring feasible; at what moment does it apply; who are the stakeholders; which stakeholders are retained and which are shed; and who is in charge? These questions imply that business rescue is subjective, arbitrary, and complex. There are also a number of problems associated with business rescue: misuse, recidivism, market disturbance, less competitive pressure, changing the access to and costs of finance, and giving firms the benefit of the doubt. Trying to stretch the insolvent firm is indirectly subsidizing bad performing firms. In general, the law should aim to reduce uncertainty and resolve conflicts. However, business rescue adds to complexity and subjectivity. It seems as if business rescue is focused on the incidental, specific firm on the short term, whereas insolvency law should focus on the structural "general firm" and the long term.

Good arguments are needed to introduce and strengthen this kind of market interference. Several (implicit) dogmas shift the balance even further and thereby reinforce the business rescue process. However, these dogmas could be questioned. To summarize, there are five related dogmas of business rescue culture that culminate in an overarching dogma that can be derived from the different stylized facts.

98. See Diane Dick, "The Chapter 11 Efficiency Fallacy" (2013) *Brigham Young University Law Review* 759.
99. *In Re Mirant Corporation*, 334 B.R. 800, 848 (Bankruptcy Court, Northern District of Texas 2005); see Marshall Huebner and Damian Schaible, "Valuation in Chapter 11: Overview and Tolls for Consensual Resolution," Chapter 2 in Global Legal Group, *The International Legal Guide to Corporate Recovery and Insolvency 2009* (GLG, 2009), available at: <https://www.davispolk.com/files/files/Publication/6771a85a-00c8-4d69-b1fb-1b5263b2edec/Preview/PublicationAttachment/3aca3008-f6c0-4c9d-addd-1e5183e0b01a/INS09_Chapter-2_Davis-Polk--Wardwell.pdf>.

From Sections III. B and III. C, it can be concluded that networks or value chains are the essence of the complex business environment. The difference between markets and firms is more fluid than usually is recognized. Businesses crystallize and dissolve. This brings us to the first dogma:

1. The firm is the fundamental unit in the quest for value[100]

This dogma is shared with the legal conception of the firm,[101] economic theory of the firm, and business studies. The firm is an important vehicle for clustering resources. However, it is only a temporal cluster embedded in a network of capabilities. Businesses crystallize and dissolve as networks are reconfigured. The connections of capabilities within the network are more fundamental than the firm.

A firm has less strict boundaries and more external ties than usually is recognized. The firm is a temporary coalition that attracts and repels resources. It is not necessary that (growth) opportunities should be executed under the current membrane of the corporate veil. The static, efficient, and strict boundaries view on the legal and economic theory of the firm and business sciences do not correspond to the complex economic forces of capitalism. These theories do not correspond to the empirical and theoretical facts of firm turnover, mergers, failure, emergence, serendipity, luck, mistakes, divestures, and alliances, which more resembles (an evolving) complex business ecology. In business ecologies, or self-organized value chains, it is connections that count (and not if these connections are interconnections or intraconnections). The focus should be on the (whole) value chain, not on the individual firm.[102] The changing links between the intervalue and intravalue chains are the unknown outcome of an emergent self-organized complex system. Business rescue is focused on the incidental, specific firm and the short term; however, the focus should be on the general, structural firm in the long run.

From Sections III. C and III. D, it can be concluded that firms do not have an eternal life. The presence of the shield, shelter, or isolating mechanism of the firm is severely limited in time. Besides, because of accelerating competition and innovation, the average life span of a firm is decreasing. The second dogma is therefore:

2. Long-term survival is considered to be the normal outcome of the quest for value

Here again, this dogma is shared with the economic theory of the firm, the legal conception of the firm, and with business studies. However, prolonged survival of firms is very rare; the business world is simply too complex. On average, 10% of all

100. This basic and "fundamental unit view" can be questioned on philosophical (the firm is only an interactor, a temporary vehicle), theoretical (the firm is only a collection of transactions or resources, and the firm is just a tiny fraction within a value chain), and empirical (firms have no eternal live, disappear frequently, and cannot in general create sustainable competitive advantages) grounds.

101. This article focuses on the implicit dogma of the *individual* business entity. Corporate groups consist of more business entities, thereby creating more flexibility in changing the boundaries of the group.

102. Verdoes and Verweij, above note 40, 87.

enterprises in the USA and Europe vanish annually. Failure (and change) is endemic and structural[103]; success is incidental and limited in time.

Businesses exist because they create limitations to be distinctive: They reduce the environment and focus on a limited number of products, processes, or business activities. Yet the number of potential threats is unlimited. Success comes from limitations in different disguises, but failure comes, however, from unlimited possibilities. Focus, specialization, and immobilization are reasons of existence in specific, but failure in general. Failure is far more pervasive than existence and survival. There are simply too many unknowns. The only way of selecting firms is through testing by Smith's "invisible hand." The market extracts (in a biased but objective way) poor performing, wealth-destroying firms out of a total business population.[104]

Business failure is structural and endemic. Viewed from the firm in specific, failure conflicts with the basic premise of most of the firms' stakeholders. So, from this perspective, failure is a bad outcome, because stakeholders are inclined to believe that the idiosyncratic resources of a firm embody a sustainable advantage. Conflicts between stakeholders arise especially in case of insolvency, with severe emotional reactions. Failure could be detrimental to the stakeholders, because additional costs are incurred by reallocating their efforts, and investments that could be written off. However, markets dictate whether a firm is sustained; the cluster of idiosyncratic resources does not create value by itself. Value creation is unknown and follows a process of trial and error.

For the system as a whole, creative destruction creates value; evolution is not focused on the individual firm, but on the aggregate performance. It does not matter where the knowledge resides. In this process of trial and error, firms crystallize and dissolve; the firm thus plays a subordinate role. This process is highly wasteful, but that also applies to competition. To be distinctive and to outperform competitors require high costs and investments.[105] The market eliminates nonvaluable clusters; thus, business turnover is a sign of system success. The result is a reallocation of resources – especially into more valuable directions. This brings us to the third dogma that can be derived from Sections III. B and III. F in particular:

3. Failure of the firm is bad

Failure is considered to be bad, because it is wasteful. However, this "waste" is a necessary element of capitalism as a knowledge, problem-solving system. The enormous turnover in business activity is a (healthy) sign of capitalism; in the

103. The endemic nature of failure can be justified on philosophical (there are too many unknowns), theoretical (the firm cannot cope with everything, is partly immobile), and empirical (statistics show the frequent disappearance of firms) arguments and by analogy or abduction (extinctions in biology, falsification in science).

104. See Verdoes and Verweij, above note 40, 84. This corresponds to the population ecology view of organizations: Michael Hannan and John Freeman, "The Population Ecology of Organizations" (1977) 82 *Journal of Sociology* 929.

105. Usually, competition in general is assessed more positively because it is assumed that it increases efficiency and diversity. However, the same arguments apply to business failure. Besides, business failure in general is a consequence of competition.

coevolution of markets and firms, valuable resources are selected and allocated in the self-organized value chains. Markets select poor performing (wealth-destroying) firms through some form of creative destruction. But this restless capitalism has positive consequences for the aggregate macro-perspective. A market's primary function, based on the complexity perspective, is to differentiate between valuable and nonvaluable businesses. The reason why markets are so good at this is their computational efficiency as distributed processing systems. Beinhocker asserts that markets are almost pure evolutionary systems. Markets superiority in command and control is attributable not to their efficiency at resource allocation in equilibrium but because of their effectiveness at innovation in disequilibrium.[106]

Business failure recidivism shows that it can be detrimental to sustain insolvent firms. Besides recidivism, the rise of zombie firms is a new recent phenomenon.[107] A zombie firm is a firm that is barely viable, but due to very low interest rates and repetitive capital, restructuring is kept alive. This phenomenon has been recognized as a key driver of slow productivity growth in Japan after the long recession.[108] Keeping alive zombie firms prohibits the flow of resources to more productive firms, creates an entry barrier, and crowds out innovative firms. Failure of the firm and reallocation of its resources is not bad viewed from the aggregate picture, continuing and stretching value-destroying firms is bad. Preventing bankruptcy of insolvent firms could be detrimental for aggregate productivity.

There is more variance of productivity within and across industries.[109] Business dynamism – entry and exit of firms – is a mechanism to improve allocative and dynamic efficiency of a country. It contributes to the restructuring and reallocation of resources to more productive alternatives. The process of productivity growth requires ongoing productivity enhancing reallocation. There is strong evidence that this allocative and dynamic efficiency is critical for the aggregate economic performance of a country despite the costs involved.[110] This implies that valuable knowledge of failed firms is not lost on average but reallocated. This spillover and diffusion of knowledge is the unintended consequence of enterprising; this process continuously undermines knowledge of solvent as well as insolvent firms. This follows from Section III. E and results in the fourth dogma:

106. Beinhocker, above note 19, 294.

107. See Bank for International Settlement, 87th Report (Basel, 2017): a zombie firm is a firm whose interest expenses exceed earnings before interest and taxes. Müge McGowan, Dan Andrews, and Valentine Millot, "The Walking Dead? Zombie Firms and Productivity Performance in OECD Countries" (OECD Working Paper No. 1372, 2017), 10, define a zombie firm as old firms that have persistent problems meeting their interest payments or more specific: firms aged ≥10 years and with an interest coverage ratio < 1 over three consecutive years.

108. Ricardo Caballero, Takeo Hoshi, and Anil Kashyap, "Zombie Lending and Depressed Restructuring in Japan" (2008) 98 *American Economic Review* 1943; Joe Peek and Eric Rosengrie, "Unnatural Selection: Perverse Incentives and the Misallocation of Credit in Japan" (2005) 95 *American Economic Review* 144.

109. Andrew Haldane, "Productivity Puzzles" (Speech at the London School of Economics, 20 March 2017), available at: <https://www.bankofengland.co.uk/speech/2017/productivity-puzzles>; John Haltiwanger, "Firm Dynamics and Productivity Growth" (2011) 16 *European Investment Bank Papers* 116, available at: <https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1984016>.

110. Haltiwanger, above note 109.

4. Valuable knowledge is lost when a firm fails

The usual premise is that valuable idiosyncratic resources and capabilities are lost if a firm goes bankrupt. However, valuable knowledge of failed firms is not lost in general; it is usually absorbed and captured by other firms. Hoetker and Agarwal conclude that death is not fatal because of knowledge diffusion.[111] Knott and Posen indicate that failed firms generate externalities that significantly and substantially reduce industry cost. On average, these benefits exceed the private costs of the (failed) entrants. Thus, failure appears to be good for the economy.[112]

In line with this dogma is the next. It seems as if transforming going concern value into liquidation value wastes capital. However, this lower value is only revealed at this specific moment. It is not that bankruptcy destroys value in general, but that value destruction creates bankruptcy. This last dogma follows especially from Section III. F:

5. Failure of the firm decreases the value of the firm

Markets separate underperforming from well-performing firms through an objective and neutral criterion (which can of course be biased): a firm that does not pay its debt. The possible threat of insolvency disciplines the firm. This criterion creates an objective equal level playing field on the capitalist landscape. It could be that insolvency proceedings have two pitfalls: the low debt-coverage ratio and the low percentage of the failed firms that continue their business. From the perspective that the business is still viable and able to create and capture value, (static) efficiency is the encompassing norm, failure comes suddenly, reorganization is quick and easy, failure is only a temporal financial problem and the resources are less (or not) valuable in another alternative allocation, this statement could be right. But these requirements are very, very strict. Is this selection bias (the insolvency criterion) so strong that it destroys much going concern value on average?[113] Failure seems wasteful because liquidation value is lower than going concern value. However, the firm as a source of value can also be a source of failure: "Bankruptcy is not the cause of the decline in value of the firm; it is the result."[114]

V. Conclusion

The overarching dogma is that the business rescue culture focuses too strongly on the firm level; the firm in general, however, is just a tiny temporary factor in the business ecology. Business rescue in general should cross the fluid boundaries of the firm. Insolvency procedures can be brought to a higher level by taking the unintended consequences of this aggregate level into account (e.g. removing competitive pressures, distorting competition, and changing the level playing field of creditors). In 1776, Adam Smith "discovered" economics by introducing a higher

111. Hoetker and Agarwal, above note 90.
112. Knott and Posen, above note 88, 617–618.
113. See Verdoes and Verweij, above note 40, 85.
114. Alan Marcus, Richard Brealey, and Stewart Myers, *Fundamentals of Corporate Finance* (McGraw-Hill, 2012), 459.

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societal level – the individual is led by an invisible hand to promote an end, which was not part of its intentions.

The subtle unintended consequence of entrepreneurial delusion – business failure – is valuable for society but not at the individual firm level. Entrepreneurial delusion[115] is essential to the progress of our society; it is the engine of capitalism. Business failure is a more positive, fundamental, important, and a common phenomenon than we have hitherto acknowledged. Value creation is the outcome of a complex and uncertain process of trial and error and creative destruction. The costs of failure are the unintended consequence of a quest for solutions of societal problems and needs.

Competition is usually considered to be a positive element of capitalism. However, competition is extremely wasteful. There are high costs and investments involved in creating a specific distinctive valuable combination of idiosyncratic resources. Business failure indeed is a wasteful phenomenon of capitalism too. Competition and business failure are both parts of capitalism's great strength: Its creativity that by necessity makes it a hugely inefficient and wasteful evolutionary process.[116] Besides, business failure is a consequence of a competitive process. It is not clear why these elements are assessed so differently.

115. "American businesses are numerous yet fragile. They enter and exit most industries in large numbers, even where rational calculations about economic incentives indicate 'do not enter' ": Stubbart and Knight, above note 54, 83.

116. Hanauer and Beinhocker, above note 25, 33.