



SOCIETY OF ACTUARIES

2014 Enterprise Risk Management Symposium
Sept. 29 - Oct. 1, 2014, Chicago, IL

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By Charalampos Fytros

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"Planning is the essence of risk management."
—Adam Lindquist, PRMIA—Director of Membership

"... planning is just another name for the obstruction of the future."
—Martin Heidegger (1889-1976)

Rigid, Fluid and Context-Dependent Enterprise Risk Management

By Charalampos Fytros

One of the hottest themes today is about enterprise risk management (ERM). Current literature on ERM practices is immense. The last few years, an intriguing collaboration between actuaries (David Ingram and Alice Underwood) and anthropologists (Michael Thompson), has provided us with a fresh and innovative perspective toward ERM that takes its cue from what is known as cultural theory of risk.

Cultural theory of risk is a novel theory that offers an ERM perspective¹ that opposes the established perspective of the two dominant but competing theories (classical economics and behavioral finance) in an original and promising way. In the first section, I want to clarify what I find illuminative and what I find dangerous in such a theory. In order to do that, I will introduce the theory's ERM perspective and try to place it relative to the views of the two mainstream theoretical competitors—that is, of classical economics and behavioral finance. In the second section, I will assume a broader view and try to explore how the theory's ERM assumptions and prescriptions fare relative to the perplexities introduced by our postmodern, technological world. In the concluding section, I will shift my focus to the "context" of a "context-dependent ERM."

1. Rigidity, Fluidity and Contextuality

We begin with the illuminative part of the cultural theory of risk: It is obviously the recognition of different risk attitudes. The theory limits its scope (and in that way builds significant explanatory power) to four different risk factions, each with its own risk attitude: the maximizers, the conservators, the pragmatists and the managers. Each risk faction can optimally operate within a specific phase of the risk cycle (i.e., a specific risk environment): maximizers during the boom phase, conservators during the bust, pragmatists in uncertain times and managers in moderate times. In such happy cases the expectations of each risk faction are aligned with the actual stimulus received from the environment. Yet, this is not what happens when the faction is asked to operate in an unfavorable risk environment—then, surprises emerge that are the product of the mismatch between what the members of the faction expected to happen and what actually happened. For example, a firm following a maximizer's strategy will experience total collapse in a bust risk environment, when expectations meet reality only within the strategy of the conservator faction.

¹ In what follows, whenever I refer to the cultural theory of risk and its ERM perspective, I explicitly limit myself to the ERM literature produced by Ingram, Underwood and Thompson (IUT) on the issue: see IUT(2012a), (2012b), (2012c), (2012d), (2012e); Ingram (2009), (2009-2010), (2010a).

Such a perspective is illuminative in that it doesn't consider the risk manager as a rational agent who is called to steer his decision-making through the diverse risk environments of the risk cycle under the universal and timeless auspices of the rational and/or empirical-based reasoning, as for example classical economics suggests; neither does it consider him as a vulnerable-to-biases agent who urgently needs to manage and overcome his inherent biases in order to properly act and attain optimal decision-making (even if that optimal decision includes a rejection of all decisions in the face of the ultimately insuperable randomness of the world—following, for example, the claims of Nassim Taleb's *The Black Swan*). Instead, it clears the way to regard him as an agent who is governed by a primary set of risk concerns; that is, as an agent who structures his choices and decision-making through the lens of his particular set of risk concerns that eventually build his identity and thus separate him from agents with different risk constellations.

Now, such a thesis alters the landscape of what constitutes best practices in risk management in unexpected ways. Think of it this way: The crucial question that existing theories attempt to answer is how a firm should enhance its risk management capabilities. Classical economics respond to the challenge through developing a multiple of techniques (think of value at risk (VAR), economic and risk-based capital, embedded value, risk-adjusted return on capital (RAROC), etc.), which all build around the central idea of rationality (without obviously excluding evidence-based reasoning). The objective is for a firm to hone its rational identity—apparently, by honing the rational identities of its key managers. Behavioral finance adds to this ambition many unforeseen (by the classical theory) and for some, ultimately insurmountable frictions: Given our inherent biases, honing rationality should not be thought of as a simple or straightforward task—so instead of enhancing rationality, *de-biasing* might be a preferable strategy. Cultural theory, on the other hand, seems to approach the problem in a decisively different way: Recognizing that we always operate in a pluralistic workplace where different sets of risk concerns are already in place and in tension (since risk managers always come predisposed by different sets of risk concerns), and given the fact that each set of risk concerns outperforms or underperforms in favorable or unfavorable risk environments, the crucial question shifts to become if and how the firm will manage to align the requirements of the risk environment with the proper risk attitude so as to define its optimal risk strategy. In simple words, the problem is, how a firm can let the right faction dominate in the proper risk environment—how to match, that is, risk environment with the right faction's expectations. So, in the framework of the cultural theory, risk management seems to transform from a rational or de-biasing exercise to something like "risk faction vs. risk environment management": Given changes in the risk cycle, if the dominance of one risk faction expires exactly at the turning point of the risk cycle, so that the dominance of the new risk faction begins and endures for as long as the next phase of the risk cycle holds (and assuming that each risk faction has been accurately mapped with each phase of the risk cycle), then the firm's risk attitude will have managed to attain full alignment with the risk environment and thus complete immunization from surprises (which obviously constitute unexpected sources of risk). The process of seeking to align risk attitude with risk environment (and thus with risk strategy that is obviously driven by variations in risk attitudes) is called, in cultural theory terms, rational adaptability.

Of course, cultural theory proponents recognize that you cannot time the cycles of the risk environment (e.g., the insurance cycle in the case of the insurance companies). And so, instead of hopelessly trying to follow an ideal frictionless strategy (that includes recognizing when the risk environment shifts, adapting the new risk attitude and executing the new risk strategy), firms should adhere to a practical substitute, which is to keep all four risk attitudes in the discussion and create compromise strategies. This is termed “clumsy solution”: It is a solution so long as it first recognizes and then harmonizes the different risk perspectives; but it is also clumsy, in that it is not ideal but a “within reach” compromise² and thus does not satisfy the clear-cut, wholly transparent and elegant criteria sought out by our classical education. Yet—and this is crucial—since a compromise is involved, it is also a solution that implies that the firm is endowed with a lofty goal, that of eventually overcoming compromise: that is, of getting closer and closer over time to the ideal of rational adaptability.

To recap:

- Established/traditional theories of classical and behavioral finance assume that a manager’s identity is ultimately coherent and constant through time, in that it is entirely defined (positively) by our rational or (negatively) by our inherently biased nature. Thus, risk management becomes an exercise to excel in rationality or de-biasing as a means to bring out at its best our uniquely defined and rigid (through time) identity. Accordingly, a firm’s identity is fixed throughout the whole risk cycle and risk management is the process by which such a fixed identity is further enhanced (in a successful risk management program) or not. Thus, I call the risk management advanced by both classical and behavioral finance, “rigid ERM.”
- Cultural theory assumes that people hold multiple identities defined by plural rationalities. It recognizes pervasive differences in risk attitude between managers. Thus, risk management becomes an exercise to excel in rational adaptability as a means to bring out at its best our multiple identities throughout the risk cycle. Accordingly, a firm’s identity is not rigid but soft, flexible and fluid, and so risk management is the process by which such a fluid identity is synchronized with the different phases of the risk cycle. Thus, I call the risk management promoted by cultural theory, “fluid ERM.”

Cultural theory illuminates that people’s identities and consequently a firm’s identity are not rigid throughout the risk cycle—i.e., they are not unambiguously defined by rationality or by inherent biases. They are instead multiply defined by diverse sets of risk concerns. If agents/managers are not rigidly defined, a firm cannot as a result hold a rigid identity: A firm with a rigid ERM program will not manage to live up to the different requirements of the diverse risk environments. According to plural rationalities proponents, this is exactly what happened to firms that were following traditional rigid ERM programs in the recent financial crisis: Living under the manager culture, banks and insurers were assessing their risk positions using sophisticated models that

² IUT (2012a).

optimized their risk-adjusted returns. But such estimations are fully compatible with the moderate risk environment, where risks are fairly predictable³—when the risk environment shifted to its bust phase, such programs simply did not meet expectations. Instead of reliable predictions, they churned out surprises and soon became irrelevant. What instead became relevant was a conservator culture under which manager-style models should be rejected, underwriting standards should be tightened, and firm-wide risk should be closely controlled. Only a firm that succeeded in converting to such a conservative attitude could fully align itself with the bust environment and protect itself against surprises. Instead, many firms rigidly clung to their already-in-place risk management plans and failed to be aligned with the demands of the new risk environment. This essentially means that a firm that succeeds in being maximally fluid and flexible throughout the risk cycle (in order to be constantly aligned with the requirements of the changing risk environment) will equally manage to immunize itself against surprises and, thus, outperform relative to others. This is the ideal of rational adaptability.

It is an ideal because rational adaptability requires recognizing when the risk environment shifts, adopting the new risk attitude and executing the new risk strategy in a frictionless way. Yet, it's worth noticing that the vision of frictionless adaptability should not be considered so "ideal"—so restrained by reality resistances that will always lead to compromises. Think of, for example, Vivek Ranadivé, founder and CEO of a successful financial-data software provider. Ranadivé is devoted to what in the computer world is known as "real-time" processing. According to real-time processing (as against traditional "batch processing"):

[Y]ou can look at information in real time, and you can make minute adjustments, and you can build a closed-loop system, where you continuously change and adjust, and you make no mistakes, because you're picking up signals all the time, and you can adjust.⁴

In this spirit, the Federal Reserve ought to make its decisions in real time—not once every month or two, since "the world runs in real time, but government runs in batch."⁵ The same is obviously more than true for the risk management function of a company: By consolidating both the firm's proprietary and public databases into one stream, so that the manager could collect all the data she wanted instantaneously in order to timely identify the current point of the risk cycle (instead of collecting information from here and there, collate, analyze and then make a decision), and by having already in store four different sets of updated risk management plans⁶ standing by in the background for implementation and execution by already trained executives, rational adaptability may not be so unattainable after all. So, we may for the time being need to adjust to clumsy solutions, yet in the near future, rational adaptability may be an actual and wholly integrated function of the company in a real-time dimension, that even manages to self-monitor the degree of its "clumsiness."

³ Ingram (2010a), p. 31.

⁴ Fox (2013).

⁵ Gladwell (2009).

⁶ Ingram (2009-2010), p. 17.

It is exactly here, I want to suggest, where the danger of this theory lies. Although cultural theory uncovers the extreme presupposition of both classical and behavioral finance that a firm's identity is not unambiguously defined and thus should not be considered rigid throughout the whole risk cycle, by supporting the ideal of rational adaptability (and its alternative clumsy solution), it swiftly assumes the other extreme presupposition, that a firm's identity should be fluid and flexible in order to fully adapt to the different phases of the risk cycle. In what follows I want to argue that a firm's identity, following people's identities, is neither rigid nor fluid, but something in between. Thus, both rigid and fluid ERM cannot constitute best ERM practices.

To begin with, let us notice that rational adaptability presupposes that full adaptability—that is, full alignment with the characteristics of the different phases of the risk cycle—constitutes best (albeit ideal) practice. Surely, to be adaptive to the environment is a valuable virtue that serves to keep you around; but I want to suggest, it's not what people (and firms) basically do and surely not what we most admire—and, consequently, not what thrives in the long run. Animals just cope so as to fully adapt to their environment—not people. People (explicitly in the West) cope in order to build identities that largely individuate them. That is, our skillful coping is directed not only toward effectiveness against the requirements of the environment (that is, toward mere adaptation) but also and basically toward producing enduring identities that people regard as worthy. That is, we mostly live a “maladapted” form of life by clinging to ways of doing things that promote and perpetuate the concerns that constitute our identities even when we are shown more adaptable and effective ways of coping.⁷ Think, for example, of Walter J. Schloss, named by Warren Buffet “the super-investor from Graham-and-Doddsville”: Being in the business of value investing for 45 years, he had the chance to deal with quite diverse risk environments. Over the years, while he remained focused on following a strategy of finding net-net stocks (stocks that were selling below their working capital), he had to face a changing world that progressively made these stocks almost impossible to find. He did not hesitate to adjust his strategy based on book value:

We changed our strategy a little, but remained true to Graham's [i.e., the father of value investing] principle of downside protection.⁸

He did not convert to a quantitative investor; he did not change into passive investing—that is, he didn't fully adapt to the new requirements of the financial universe. However, he was open enough to change and keep pace with the changing world, by reconfiguring his risk concerns (downside risk) without nevertheless abandoning them in the name of more effective ways of coping (such as quant or arbitrage trading). We praise Schloss for being one of the greatest value investors ever,⁹ that is, we praise him for authentically being who he was; we do not simply praise him for being efficiently adaptive (a speculative bet can also make money and thus seem to be fully adaptive to the requirements of the markets—yet, for most of us, this is not to be praised). And on the basis of such praise, other people today are inspired to follow and perpetuate his

⁷ Spinosa, Flores and Dreyfus (1997), p. 147.

⁸ Chan (2012), p. 14.

⁹ Over a 46-year investment life, he had turned a \$10,000 investment into \$11 million (ibid., p. 3).

concerns by re-articulating and reconfiguring them in the face of the evolving demands of a new world—thus, keeping the business called “value investing” alive and kicking.

To put it differently, most people and companies adapt to the changing environment through building stable (neither fixed nor fluid) identities that can incorporate change by being open and sensitive to external challenges. By holding on to such challenges—i.e., by holding on to surprises (as termed by cultural theorists) or anomalies (as termed by T. Kuhn¹⁰)—we have the chance to skillfully deal with them by, e.g., reconfiguring our style and thus create new ways and possibilities that enable all those involved to take better care of their (and our) concerns.¹¹ Full adaptation (as sought by rational adaptability) leads to *over-reaction* to external surprises (by disregarding altogether the already-in-place style and identity of the company); no adaptation leads to *under-reaction* (by disregarding altogether the changing pace of the world). In that respect, fluid ERM leads to full adaptation but also to discontinuing practices, and thus to the dispersion of the accumulated expertise of the firm, while rigid ERM leads to preservation of the firm’s old practices and thus to the discontinuance of the development of new expertise. Best ERM practices (in normal situations¹²) should allow for changes without disrupting continuance of the firm’s identity. We may call such practice “context-dependent ERM,” in that it takes into account the current risk concerns of the firm as developed throughout its history and leaves space to meaningful change in the face of the demands of a changing risk environment.

To anticipate our discussion in the following sections, we will note that the idea of context-dependent ERM cannot serve as a manual that can tell us how to follow a successful ERM program—it does not constitute a theory, that is, “a coherent group of tested general propositions that can be used as principles of explanation and prediction.”¹³ It is too situational. But it is here where its power rests, in that it does not cover up the way people actually cope with the challenges of their work in an everyday (i.e., normal) context. The point is that ERM people are people already enmeshed in ERM practices to which they have been acculturated and through which they have developed skills and sensitivities that dictate to them what makes sense to do. In such everyday coping, disharmonies occur; by embracing and holding up to such disharmonies, one may subsequently succeed (or fail) to change that organized set of practices to which he is already attuned and on the basis of which he can deal with oneself, others and the everyday tasks and undertakings. What is crucial here is *not* that this already-in-place, organized set of practices renders itself dysfunctional due to its progressive erosion caused by infiltrating non-rational elements or inherent biases as the established theories contend, nor, following cultural theory proponents, due to the fatal inability to timely recognize the turning point of the risk cycle and thus miss adaptation; what matters under context-dependent ERM is the recognition and holding

¹⁰ Kuhn (1996).

¹¹ Spinosa, Flores and Dreyfus (1997), p. 191, n. 5.

¹² By saying “normal situations,” I mean the everyday normal work that we usually and for the most part deal with. I do not mean situations like acquisition, massive or selective dismissals of key players, etc., where a breakdown of the firm’s normal coping is involved.

¹³ This is the definition of the word “theory” as drawn from *dictionary.com*, <http://dictionary.reference.com/browse/theory>, accessed Jan. 10, 2013.

on to a disharmony and the subsequent (in)ability to respond to it. This essentially means that context-dependent ERM is about sensitivity and not about optimal application of already-thought and well-articulated principles (as tested by a well-formulated theory).

To show the variety of the ways a firm can follow in order to respond to the identified disharmonies (a variety incompatible with the imperative of rational adaptability), we may actually use some of the insights of cultural theory. When constituting its picture, fluid ERM allows for only two key elements: (i) the risk cycle (i.e., the four different risk environments—boom, moderate, uncertainty and bust) and (ii) the four different risk attitudes (maximizer, manager, conservator and pragmatist) that drive agents to form their strategies. It is interesting to see where we are led if we allow for one more: the life cycle of the firm as a rough approximation of its history and current identity. We can equally distinguish four different phases of the life cycle of a company: growth (where profits increase with an increasing rate), maturity (where profits increase with a decreasing rate), uncertainty (where uncertain profits either increase or decrease) and decline (where profits decline).¹⁴ Now, if we simplify things by assuming that more or less a firm’s ERM risk attitude coincides with its phase in its life cycle (i.e., assume that the ERM practices of a firm are led by maximizers in its growth phase, by managers in its maturity, by pragmatists in its uncertain phase, and by conservators in its decline), then the only source of disharmony is between the risk environment and the current phase of the firm’s life cycle. Obviously, the ERM practices already in place of a mature company within a boom risk environment are disharmonious: so, can we distinguish different ways of changing those practices with regard to the current life cycle phase of the firm? Take a look at the following table:

	<i>Different Stages of the Firm's Life Cycle</i>			
<i>Actual Risk Environment</i>	Growth	Maturity	Uncertainty	Decline
Boom	Unchallenged	Challenged to cross-appropriate	Challenged to re-articulate	Challenged to reconfigure
Moderate	Challenged to stay in course	Unchallenged	Challenged to re-articulate	Challenged to reconfigure
Uncertainty	Challenged to stay in course	Challenged to cross-appropriate	Unchallenged	Challenged to reconfigure
Bust	Challenged to stay in course	Challenged to cross-appropriate	Challenged to re-articulate	Unchallenged

¹⁴ Having introduced the four phases of the life cycle of the firm and following the insights of cultural theory, a firm that, for example, finds itself in the growth phase and is run by maximizers in a boom environment, is a firm with a successful ERM program that gets no surprises. It seems then, that instead of trying to align only two elements—risk environment with risk attitudes—cultural theory proponents should better allow for the alignment of three: risk environment with risk attitudes with the phase of the life cycle of the company. For anyone deciding to follow this line of thought, in essence, he still remains confined within the cultural theory’s boundaries and has only succeeded in adding one more layer of complexity.

- A firm in the decline phase that finds itself in an-other-than-bust environment is challenged to reconfigure: that is, it is challenged to change its style in a substantial way. For example, a company in its decline phase caught up in a boom environment may require assuming more maximizer-style ERM practices that normally remain in the margin during its decline phase (as governed by conservators). So, in this case and under reconfiguration, it seems that context-dependent ERM may agree with fluid ERM in that a substantial change of the risk strategy of the firm is required (which will better align the firms' risk practices with the actual risk environment).
- A firm in the growth phase is challenged during other-than-boom risk environments. According to fluid ERM, a growth company caught up in a bust environment should substantially change its ERM strategy toward more conservator-style ERM practices, in order to better align with the actual risk environment and thus streamline disharmonies. But I want to suggest that the normal environment of a growth company is exactly a highly disharmonious environment. A firm in its early stages, trying to market an innovative product that aims to change or reconfigure its customers' practices (so that they find it useful and desirable), is destined to act and grow in a disharmonious environment (whether it be boom, moderate, uncertainty or bust). So, a more plausible way (and in fact the way pursued by many entrepreneurs) is for the firm to hold on to its course, that is, to keep building its identity assuming significant amounts of risks that will naturally fade away as soon as its innovations become an integral part of its customers' practices. Thus, in this case, context-dependent ERM aligns with rigid ERM in that an enhancement of the already-in-place risk strategy is required, without any strategic change.
- Firms in the maturity stage are firms that usually keep a close eye to competitors. When they have to operate in, e.g., a boom environment, they might realize that they fall behind competition. Such firms need not attempt a substantial change of their practices but may try to appropriate successful practices from competitors or other sectors that they believe can assimilate and can offer back their lost edge. Consider, for example, Bo Andersson when in 2001 he became the top purchasing manager at GM to realize that GM had 26 different seat frames (compared to Toyota which had only two), 12 V6 engines (when Toyota and Honda had two each) and 12 fuel pumps (when Toyota and Nissan had two). Based on cross-appropriation from competitors, GM proceeded to build a comprehensive risk management approach to internal manufacturing to enhance production efficiency.¹⁵ Cross-appropriation may also, for example, allow the insurance sector to implement an ERM strategy of counter-cyclical policies as followed by the banking sector—yet, the possibility of counter-cyclical ERM policies (e.g., relaxing underwriting standards in a bust environment) is totally missed by the proponents of

¹⁵ Hampton (2009), p. 19-20. The author presents this case as an example of an organization (in this case, of GM) that had reached maturity and could no longer “depend upon a rapidly growing market for goods and the continuation of the business that made them successful.”

rational adaptability, which requires tightening underwriting standards in a bust environment. Thus, in this case, context-dependent ERM diverges relative to both fluid and rigid ERM.

- Firms in the uncertain phase usually find themselves at a crucial point. They have accumulated extensive experience and have built a history in the market—however, competitors have caught them up and alternatives abound. According to fluid ERM, within, e.g., a boom situation, they should be allowed to assume more risks and go for it. But the real problem such firms face is not their potential high ERM standards that should be relaxed—such firms face a deeper problem. It seems that their dominant practices as developed throughout their history are “not being true to themselves.” It’s not that they are “wrong” in what they do (how could they be wrong after such a long history in the market), nor that they are simply out of date (the firm may have accumulated competitive and up-to-date expertise); it’s just that their dominant practices seem not to reflect the firm’s mission anymore. Such firms face an “existential” problem in that they need to re-articulate themselves. Such firms do not need to dump their accumulated expertise in order to begin anew, but need to re-motivate such expertise within the framework of an innovative re-articulation of their mission—consider how Apple Computer, following the situation it faced after the powerful Macintosh, re-articulated itself as a consumer electronics and media sales industries leading it to drop “Computer” from the company’s name in 2007.¹⁶ In this case, context-dependent ERM again diverges from both fluid and rigid ERM.¹⁷

What we claim, based on the aforementioned discussion, is that context-dependent ERM may lead a firm to either align its ERM practices with rigid or fluid ERM prescriptions, or, alternatively, precisely due to the “context,” to steer them away. In other words, it seems that the question of which ERM strategy a firm should adopt (that is, which faction/camp should take charge and be in operation within the firm) is an open-ended issue and cannot easily close, even if it is ingeniously linked with the phase of the risk cycle (as Ingram and Underwood have attempted to do—but more on that in the next section). This essentially means that context-dependent ERM cannot be seen as a new theoretical road map that aims to substitute for fluid ERM (the same way fluid aims to substitute for rigid ERM). After all, “context-dependent” coupled with “theory” seems ambiguous and highly suspicious. Its ambition is to uncover the variety of challenges and the variety of responses that can be given by practitioners from within their current and historical contexts (of themselves, their firm’s and their epoch’s). In that sense, we could boldly claim that context-dependent ERM is what makes possible in the first place the emergence of theories like rigid ERM and fluid ERM. Such theories tend to focus on specific parts of our practices, covering up the variety and richness of everyday contexts. Such variety is destined to be missed by all theories—including the promising cultural theory of risk. This is not because every theory is destined to be surpassed by a more sophisticated one (all theories are in their way highly sophisticated), but because theories are products of *detachment*: detachment enables us to

¹⁶ “History of Apple Inc.” from Wikipedia, http://en.wikipedia.org/wiki/History_of_Apple_Inc., accessed Jan. 11, 2013.

¹⁷ Reconfiguration, cross-appropriation and re-articulation are introduced and developed in detail by Spinoza, Flores and Dreyfus (1997). For the idea that people’s identities are neither rigid nor contingent, see especially p. 31-33.

obtain a wider view and thus isolate the critical features of things in order to study their (deterministic or stochastic or whatever) interconnections. Yet, involved practice (the kind of practice exhibited by ERM practitioners in their everyday undertakings) is the only way to respond to small perturbations within the practice that such interconnections simply miss¹⁸ (because there is no way a theory can account for them—and responses to such perturbations seem arbitrary before the fact, but quite “rational” after the fact). In order to respond, you need first to recognize the perturbation. But such recognition does not come by adopting a detached stance (as by noticing a problem and standing back to work it in your mind¹⁹): disharmonies are *felt* within the practice itself—they are local and embodied, not general and disembodied. The more you practice, the more such a tension uncovers itself and demands to be dealt with.

ERM has grown to become a dominant practice of modern companies. It has grown as a response to particular perturbations in previous standard practices. In that way, ERM practices have changed throughout history—i.e., they are historical practices. Rigid ERM views ERM practices as ahistorical—in that they involve the necessary strengthening and sharpening of a particular type of risk attitude (that of the rational manager) that was and will be, after all, always there, and always true. Fluid ERM, on the contrary, thinks ERM practices are non-historical—it reduces them to a sequence of discontinued different risk attitudes that only need to be accurately synchronized with the contingent,²⁰ incompatible phases of the risk cycle. Context-dependent ERM—the kind of ERM risk managers are normally engaged with—steers its way beyond those two extremes.

Nevertheless, an issue remains: Every time a perspective mounts suspicion that it departs from the implied positivism gained by a clearly defined theory, that it injects ambiguity where unambiguous standards should reign, uneasiness emerges. After all, an organization (an insurance company for that matter) can be defined as an entity with efficient mechanisms in place capable of disambiguating events and of providing clear-cut direction for participants. I won’t deny that context-dependent ERM does not seem to constitute a proper candidate for such a job (when both rigid and fluid ERM seem able enough). But I do deny that our job is to clarify, to disambiguate the ambiguous—at least not in our postmodern technological era, that of the 21st century.

2. ERM in a Postmodern World

At the end of the previous section, we claimed that ERM practices are historical (neither ahistorical, nor non-historical), i.e., they have a history of changes that cannot be fully captured by claiming that they are either necessary or contingent.²¹ In this reading, Ingram, Underwood

¹⁸ Spinoza, Flores and Dreyfus (1997), p. 179.

¹⁹ *Ibid.*, p. 23.

²⁰ “The stages [of the risk cycle] are really not quite like seasons. They do not follow in any particular order, and one stage might last for a very long time.” Ingram (2009).

²¹ The same way we, as humans, have an identity history. Can I claim that my identity is the product of an ahistorical urge to fulfill my inherent nature and become, say, an American? Not at all. My being an American should better be attributed to contingent factors. Does that mean, then, that everything that constitutes my identity could be attributed to contingency? Not at all either. Parts of myself have been unambiguously shaped by necessities. Can we then talk about a mixture of both? I don’t think so: Such a vocabulary tends to conceal not only the inherent tension

and Thompson (IUT) are pioneers at challenging the ahistorical character of ERM practices, as implied by rigid ERM. Yet, their fluid ERM covers the historical character of ERM practices by turning them non-historical and simply contingent to the risk environment. If we admit that ERM practices have a history, then we have to admit that practices change neither in a necessary (and thus, in principle, predictable) nor in a contingent (and, thus, unpredictable) way; if we thus exclude necessity and contingency, all that remains is to ask ourselves how ERM practices seem to change in today's postmodern context. Then, we might discover that to include an imperative of disambiguating does not seem a proper ERM strategy for the current context. But this is exactly what is offered by rigid and fluid ERM.

The critique that follows will focus on fluid ERM. That rigid ERM enjoys a positivistic, scientific ontology that aims to discover and secure certainties (via systematic rational and evidence-based reasoning) out of which clear-cut and unambiguous directions and imperatives can be prescribed, is hardly news. But what about fluid ERM? For the first time in the current technical ERM literature, IUT dare to challenge rigid ERM's ontology by claiming that ERM strategy does not emanate from one source—that of the scientific/quantitative/analytic/statistical-actuarial tribe: in IUT's jargon, that of the rational "manager" who builds stochastic models of economic capital under a statistically oriented view. For the first time, ERM strategy is *not* defined by a single tribe within, e.g., an insurance company that can claim legitimacy in reading the "risk-book of nature" (i.e., the risk environment) out there. For the first time, rational and empirical-based, quantitative risk analysis does *not* constitute a self-sufficient practice of calculation that naturally imposes itself to the other tribes—i.e., it does not lead to consensus imposed by nature (the risk environment). Instead, IUT invite us to keep open the discussion to all four risk camps and attitudes. But at exactly this invitation, IUT's approach seems to flirt with alarming suspicions: If the managerial tribe of scientific risk analysis cannot be naturally imposed to the other camps, what remains? To put it differently: If we put nature (i.e., risk environment) out of the equation given that its previously single legitimate representative, the "manager," proves to be just one representative among others, what then remains? An obvious answer: society with its Machiavellian-type games of power, manipulation, cajoleries, badgering—in short, struggles between camps for domination. And then, what ERM system can a company build that is grounded on intra-organizational turf wars between diverse rationalities and interests? This is a possibility excluded by rigid ERM. But how can it be excluded by fluid ERM as well? It is here that IUT bring nature back: An ERM function should "read" the phase of the risk cycle out there and should then seek to align it with the appropriate faction—maximizers during the boom phase, conservators during the bust, pragmatists in uncertain times, and managers in moderate times. That is, by introducing a "risk faction/environment management," IUT proceduralize ERM in an attempt to close the open-ended character that the Machiavellian-type society threatened at a

involved, but also the fact that notions like "necessity" and "contingency" should be better used as *resources* for explanations, not as *causes* that explain. I'd prefer a description of the type "necessary, yet contingent" (or "contingent, yet necessary").

moment to impose. But as we saw in the previous section, the open-ended character for the determination of a company's ERM strategy remains, even after linking with the risk cycle.

There are two problems with the solution proposed by IUT: The first one is about reading the risk cycle and understanding “where the environment is and where it is moving”²²—is it a boom, a bust; are we in moderate or uncertain times? To proceed with a “risk faction/environment management” you need primarily to appropriately “read” and identify the stage of the risk cycle (that will signal for the appropriate faction to match with) and assume consent. But which faction is going to legitimately provide such a reading that will naturally lead to consent? We have just seen that IUT have removed any legitimacy from the quant, statistical-oriented “managerial” tribe in reading the risk environment and imposing its view. In order to “read” the environment, you need to represent and measure—you need instruments. The problem is that as soon as we acknowledge the existence of four incommensurable rationalities, we are committed to equally acknowledge how each of them develops its own instrumental and interpretative procedures. There is no body of instruments to make common measurements—how can there be since each tribe develops and calibrates its instruments and metrics to efficiently detect and work within a particular stage of the risk cycle? In that respect, fluid ERM cannot even begin to flow. The shift by IUT to the compromise of the clumsy solution does not seem like a promising remedy either: We need to degrade ourselves to a clumsy solution, so long as we believe we do not “have the transcendental talent, discernment and control”²³ to properly read (and even time) the risk cycle. But the problem remains even if we ideally *have* the transcendental talent, discernment and control to time the risk cycle—if somehow the instrumental and interpretative procedures of a single tribe acquire the transcendental legitimacy to unilaterally read the risk cycle (most probably, due to its “transcendental talent, discernment and control”)—then fluid ERM becomes a variant of rigid ERM, which already bestows transcendental legitimacy to a specific faction, i.e., the scientific-type, quantitative, statistical-oriented “managerial” one.

The second one is more subtle. IUT talk about the four main stages of risk cycle (boom, moderate, uncertain and bust). They acknowledge its contingent character, in that “[t]he stages are really not quite like seasons. They do not follow in any particular order, and one stage might last for a very long time.”²⁴ Yet, such a four-stage circle is an inherited representational scheme as historically and empirically understood by previous eras. We ask: Do we have reasons to believe that in a postmodern 21st century, such a schema will continue to satisfactorily represent the “risk-book of nature”? If we doubt about it (and it's not at all obvious why we shouldn't²⁵), then IUT confront a double, deeper problem: It's not just a trouble of (accurately or clumsily) identifying the stage of the risk circle, but something more fundamental that involves *identifying the risk*

²² Ingram (2009).

²³ Ibid.

²⁴ Ibid.

²⁵ “[T]here are reasons to expect that our inherited notions of the life cycle of an industry—experimentation, growth, maturation, stabilization, decline—might need to be reconsidered. Development of new technologies is less likely to take a straightforward path of improvement and refinement so much as branching and splintering as innovations occur through recombinations with other technologies.” Stark (2009), p. 117.

environment itself. This is a problem that takes us directly at the heart of the matter: We live in a 21st century where there is constant talk about the move from traditional to quantitative finance. But what exactly is quant finance about? Quantitative finance is a distinctive combination of connectivity, knowledge and computing; it is mathematical, networked, computational and knowledge-intensive.²⁶ The move from traditional to quantitative finance is an enlargement in the number of instruments that represent, measure and monitor risk reality “out there.” But if markets and companies are increasingly entangled by a networked hypercoupling,²⁷ then the reality “out there” increasingly looks like a *socio-technical* construct consisting of other quant participants (say, the *social* part) and interconnected instruments (say, the *technical* part)²⁸ continuously reshaping, in feverish innovation, the properties of that recursive world. And the products of their interventions become a part of the phenomenon they are monitoring.²⁹

Our point is simple (and already thoroughly investigated by the literature of social studies of finance): If we have stepped into an era where the interpretation about the risk environment performed by a company may perform upon (shape) the risk environment more than the risk environment shapes the interpretation, then the distinction between two independent actors—a company and a risk environment—is blurred. But if such a distinction can no longer be held, then risk identification and management become a *collective* issue and not a solitary exercise for independent (transcendentally talented or not) executives within independent asocial and disembedded companies—which is the case for both rigid and fluid ERM. By ignoring the embeddedness of the postmodern insurance company in wider socio-technical networks, fluid ERM limits its ERM prescriptions to certain (e.g., four), easily identified states of the risk world—to what Michel Callon refers as, “cold” situations—that is, situations where actors are identified (e.g., the insurance company, the risk cycle), interests of each faction are stabilized, preferences can be clearly expressed (e.g. maximizers prefer to maximize, conservators to restrain), responsibilities are acknowledged and accepted, the possible world and its concomitant risk states are already known or easy to identify, and, thus, calculated decisions can be taken.³⁰ But when we talk about our passage to a postmodern world, we want to denote precisely that we exit from a world where cold situations were the norm into a world where “hot” situations increasingly come to dominate³¹—that is, situations where everything becomes controversial and the identification of agents cannot but be ambiguous. How can GM disambiguate between itself and the risk environment when it cannot even disambiguate its own identity: From an automobile and

²⁶ Stark (2009), p. 121-122.

²⁷ Think how this networked socio-technical hypercoupling has rendered talk about systemic risk and “too big to fail” so central the last decades: New forms of uncertainty have been created with the possibilities of crises cascading throughout the system (Stark, op. cit., p. 151-152).

²⁸ I have explicitly distinguished between the social and the technical so that the unsuspected reader may more easily appreciate the claim. Yet, the socio-technical embroglio cannot be decomposed into two pure, independent elements. For how can you be a quant practitioner without your already networked instruments? Which part constitutes the other? Since no clear-cut answer can be found, it is better to talk about a socio-technical actor.

²⁹ Stark, op. cit., p. 151-152.

³⁰ Callon (1998), p. 261.

³¹ In fact, this is one of the main arguments for a company to adopt an enterprise-level risk management function.

other vehicles firm, it has now been transformed to automobile, computer, finance, insurance and entertainment firm.³²

The passage from “cold” into “hot” situations is due in large part to the movements of the techno-sciences that are causing connections and interdependencies to proliferate. Within this labyrinth of unexpected and rapidly proliferating connections, previously autonomous decisions and actions (such as implementing an ERM strategy) are now in constant interaction and it is simply impossible to distinguish between spheres of action or institutions separated by clearly defined boundaries. Reassuring unambiguous certainties give way to tormented, ambiguous perplexities.³³

This is why at the end of the previous section, we sided with the complexities of ambiguity. The job to clarify, to disambiguate the ambiguous, is a job (once well-done) that progressively belongs to a vanishing world—and its concomitant risk reality. So long as techno-sciences breed uncertainty and controversy, they will turn “hotter” not only the global climate system but postmodern societies and inevitably companies as well. In the face of such perplexing challenges, interdisciplinary communication and collaboration are becoming essential—that is, networked complexities can only be dealt with by mongrels, not by purebreds. IUT dared to open up such a new agenda, by introducing plural rationalities. Our aim has been to show that this agenda cannot close with rational adaptability (or its clumsy subordinate)—it remains open. And in the concluding section, we will sketch out the possibility of a directional way of closure in the face of the emerging postmodern ambiguity.

3. Temporary Settlements

We may discern three ontologies or theories of truth that secure three different ERM practices: The first one declares that there is in the end only one true ultimate theory that corresponds to what is “out there.” Such an ontology produces rigid ERM. Rigidity in this framework should not be seen as something negative; it is simply the inevitable corollary of the prior commitment to stay in course and not deviate from the pursuit of that single, ultimate truth.

The second acknowledges that different theories can be true of different aspects of a single reality out there. This is the supporting ontology of fluid ERM. Plural rationalities produce true theories that correspond to the different aspects of the one reality of the risk cycle. Fluidity here is important in order to follow the flowing aspects of this single-risk reality.

³² It is instructive to reflect on what ways the actuarial education and syllabus have changed in the last decade: The emphasis on core actuarial techniques has receded in favor of more exposure in financial, investing, risk management, operations, communication and other issues. The term “actuary” seems currently inadequate to describe the field’s hybrid, risk-centered skills.

³³ Callon, *op. cit.*, p. 261-262.

The third one claims that the several systematic and topical theories that we retain are true to different phenomena and different data domains. It's like acknowledging the aspects, but not the presence of a single reality out there (like the second). According to such ontology:

Theories are not checked by comparison with a passive world with which we hope they correspond. We do not formulate conjectures and then just look to see if they are true. We invent devices that produce data and isolate or create phenomena and a network of different levels of theory is true to these phenomena. Conversely, we may in the end count them as phenomena only when the data can be interpreted by theory. Thus, there evolves a curious tailor-made fit between our ideas, our apparatus, and our observations. A coherence theory of truth? No, a coherence theory of thought, action, material and marks.³⁴

We want to claim that only such an ontology (which obviously dissolves truth or a theory of truth as promoted by the previous two) can sustain ERM practices in a postmodern world. This is because only such an ontology rejects the notion of a *passive* world out there which we, the *active* ones, hope to unravel and correspond with. And we have already commented how the proliferating connections and complexities of a postmodern world have rendered insufficient any notion or effort to discriminate between two pure "passive" and "active" entities. In the resulting hodgepodge, our appeal to a "context-dependent" ERM aims to assert that there is life beyond the ontologies that give birth to rigid and fluid ERM, ontologies that, as we have seen, can only bring closure after appeals to the one reality out there. The obvious problem with the third ontology is that, if we drop the assumption of the one reality out there, where can we then find, in the middle of the remaining hodgepodge, the necessary friction to bring a closure at the open-ended character of the ERM character (which we were at pains to reveal in the first section, against IUT's efforts) and avoid the dangers of an "anything goes" implication?

That's why we proposed to focus our attention to the "context" (of a "context-dependent ERM"), which points toward the circumstances in which an event occurs; to the *setting*. This is important: as long as we live in a hodgepodge and thus cannot elaborate a theoretical, clear-cut conception of the human agent that is contrary to the one depicted by rigid ERM (a rational being) or fluid ERM (a rational being belonging to a community), the only thing we are left with is to ask: "What is this agent's game?" This question puts aside the "will to theory" and invites us to consider the varieties of ordinary *settings* in which persons take part in concerted social activities. According to Michael Lynch:

[T]his question focuses on the "games" and not on any general account of the human agent ... entirely different distributions of agents and agencies emerge within diverse "games," such as driving in traffic, playing music together, conducting classroom lessons, solving mathematics problems at the blackboard, and so on. In any particular instance, how agency is articulated and whether or not any coherent sense of agency is relevant may depend upon the constellations of

³⁴ Hacking (1992), p. 57-58.

actions, expressions, equipment, and other scenic particulars that identify and inform a language game's course of play.³⁵

Our claim, in line with the table presented in the first section, attempts to extend Lynch's argument even further, in that the game called "enterprise risk management" does not just end up with different distributions of agents and agencies relative to the game called "driving in traffic, playing music together or conducting classroom lessons," but even relative to *itself*. There is a rich and crowded world of risk emerging from socio-technical networks, out of which diverse ERM games become *temporarily* stabilized: from routine embellishment/development of audit routines, to following the risk cycle, to breaking/disrupting already-in-place organizational ERM taken-for-granted, to redefinitions, redeployments, re-combinations of risk objects and metrics, to cross-appropriations from the banking industry, re-articulations of the company's ERM mission, to the "eyes-shut" point of view, even to postponing any course of action. ERM practices may gather and stabilize around games of normalizing deviant events, of tagging outliers relative to a central tendency, of producing visual risk clusters, of making do with scraps of info, of learning how to doodle with novel technological devices.³⁶ In that respect, published theoretical talk of ERM (like the immense literature produced in the framework of rigid and fluid ERM) does not constitute but retrospective, narrative and logically structured accounts that emphasize long-term, non-situational and theoretical goals, rather than contextual, situational and practical ones, out of which they were constituted. That is, if formalizations, routines, proceduralizations (as inherited by the previous era) that were based on retrospective theoretical accounts seemed adequate up to now to secure the disambiguation of their own initial ontological ambiguity, this cannot constitute a viable perspective into the postmodern hodgepodge. The clearly defined problem-solving strategy that avoids perplexity and ambiguity should give way to embracing perplexing situations and ambiguity. Closure cannot anymore be a *permanent* state secured by correspondence to a passive, eternal risk world; it can only be *temporal*, emerged by temporary settlements between diverse, rivaling and antagonistic camps and understandings that produce *friction* at the overlap of their intersection.³⁷

Fluid ERM acknowledges the temporal dimension of the postmodern ERM practices by acknowledging that no camp can reign and impose its ERM risk attitude forever. But where IUT "close" temporality by repetition and proceduralization, thus disambiguating the practice, we side with the complexities of ambiguity as a condition for possible communication, cooperation, rivalry, antagonism, understanding and misunderstanding between orders of intelligibility that may lead to temporary settlements, so as to get the (local) ERM job done. Best (postmodern) ERM

³⁵ Lynch (1992), p. 286.

³⁶ It's worth noticing how even in quantitative risk management, exactly where someone might expect a low variety and a high degree of convergence, Ingram talks about risk management practices that develop around incompatible exemplars such as an one-eye risk view (around, for example, volatility, ruin theory or cost of capital, beta), two-eyes risk view (around, for example, both volatility and ruin), and a multidimensional view of risk (around such diverse aspects such as short-term and long-term volatility, tail risk, parameter risk, correlation, market value volatility in one year, execution risk, liquidity risk, instability risk, etc.)—and he is in fact very cautious to point that "the choice of the best risk view is not immediately obvious." See Ingram 2010b.

³⁷ Stark (2009).

practices cannot be understood as the ordered passage from one rationality to another (or as a compromising, clumsy mix among them) as fluid ERM proposes, but as contextual and temporal re-arrangements in the patterns of how these ordered intelligibilities are interwoven in their (postmodern) socio-technical coupling.

Charalampos Fytros, CFA, FHAS, is a CFA charterholder, a fellow of the Hellenic Actuarial Society (a full member of the International Actuarial Association), and a Ph.D. candidate in the department of Organization, Work and Technology of Lancaster University, U.K. He is an independent consultant located in Athens, Greece. He can be contacted at harrisfy@yahoo.gr or chfytros@outlook.com.gr.

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