



The time that money requires: Use of the future and critique of the present in financial valuation

Fabian Muniesa and Liliana Doganova

Mines ParisTech at PSL University, France

Abstract

The future is persistently considered in the sociology of finance from two divergent, problematic angles. The first approach consists in supplementing financial reasoning with an acknowledgement of the expectations that are needed in order to cope with an uncertain future and justify the viability of investment decisions. The second approach, often labelled critical, sees on the contrary in the logic of finance a negation of the future and an exacerbation of the valuation of the present. This is an impasse the response to which resides, we suggest, in considering the language of future value, which is indeed inherent to a financial view on things, as a political technology. We develop this argument through an examination of significant episodes in the history of financial reasoning on future value. We explore a main philosophical implication which consists in suggesting that the medium of temporality, understood in the dominant sense of a temporal progression inside which projects and expectations unfold, is not a condition for but rather a consequence of the idea of financial valuation.

Keywords

Finance, financial valuation, temporality, future, critique, philosophy

Introduction: The paradox of financial temporality

What is the temporality of finance? This question has received contradictory answers in the literature. The temporality of finance is often described as being focused on the present, and associated with the terminology of speed, acceleration, instant trading, short-termism, or 'quarterly capitalism'.¹ Such descriptions are numerous. One of the most captivating ones can be found in Fredric Jameson's analysis of 'finance capital' (1997) and his diagnosis of 'the end of temporality' (2003): a situation characterised by the effacement of the past and the future,

Corresponding author:

Fabian Muniesa, Centre de Sociologie de l'Innovation, Mines ParisTech, 60 Boulevard Saint-Michel, 75006 Paris, France. Email: fabian.muniesa@mines-paristech.fr <https://doi.org/10.2218/finsoc.v6i2.5269>

and hence the “reduction to a present” (reduction to a present which is however no longer a present because there is no past and no future that could define it as such) (Jameson, 2003: 708). Another, certainly less radical example, is Langenohl’s (2018) notion of ‘financial synchronism’, which he locates in the theoretical underpinnings of arbitrage: a practice focused on the ‘instant’ of the transaction, which exploits price differentials observed in the present (and not in different points in time) and which, by getting rid of the future, gets rid of risk.

Probably as often, though, the temporality of finance is described as exactly the opposite. Highlighted here is its orientation towards the future and its engagement with uncertainty. The point seems so obvious that the need to demonstrate it is often foregone: suffice it to point to the existence of contracts suggestively named ‘futures’ in financial markets (LiPuma, 2017), or more generally to the future-driven functioning of capitalism (Beckert, 2016) or money (Esposito, 2011). The insistence on the future, a future characterised by its ‘uncertainty’, is motivated by a critique of economic and financial theories and the simplified visions of actors’ rationality and time linearity on which they rely. Thus, Beckert (2016) proposes to replace the notion of ‘rational expectations’ with that of ‘fictional expectations’, highlighting the role of narratives and imagination in the ways in which economic actors deal with the uncertainty of the future. Esposito argues for a more complex notion of time that accounts for the interdependencies between the present and the future and for the circularity of time: the idea that “the present depends on the future, which in turn, depends on the present that is oriented to it” (Esposito, 2011: 16). In this view, the future is ‘the time of money’, but a future that both acts on the present and is acted upon in the present.

These contradictory answers to the question of the orientation of financial temporalities are all the more puzzling as they are generally accompanied by the important proposition that financial temporalities translate into individual and social temporalities (Kloeckner and Mueller, 2018). Jameson (2003) identifies the expressions of the reduction to the present in philosophical, ideological, and cultural symptoms. He sees finance capital as “one of the most effective mediations ... between the cultures of postmodernity and the infrastructure of late capitalist globalization” (Jameson, 2003: 702). Langenohl interprets financial synchronism as a social imaginary that “mediates” the relationship to the future of modern societies that think of themselves as “fundamentally and reflexively contingent” (Langenohl, 2018: 27, 37). Esposito (2011, 2018) relates the orientation towards the future that characterises finance to the orientation towards the future that characterises modern ‘risk society’. She suggests that we can learn a lot about the role of time in society from the ways in which finance exploits the indeterminacy of the future, urging us to view uncertainty as a resource to be valorised rather than a problem to be solved.

The arguments relating financial and social temporalities in the literature are compelling and inspiring. What remains unclear, however, is how these temporal mediations between finance and society actually work. How do finance and society interact and how do temporal orientations, be they towards the present or the future, circulate from the former to the latter (and certainly, although this is rarely pointed out, from the latter to the former)? At stake here is more than a question of specification: what will become clear in the following is that the paradox of financial temporality in the sociology of finance is symptomatic of an impasse of sociological critique.

The scarce attention devoted to this issue in the critical, sociological literature can be explained by its empirical and analytical focus. First, empirically, finance is generally reduced to the operations of financial markets. A large span of financial activity, namely the domains of credit, capital investment, and corporate finance, thus remains beyond scope of this literature.

Yet corporate finance is particularly relevant for the temporal mediation between finance and society, because it involves principles and tools stemming from finance, such as the discounted cash flow model and the calculation of net present value, in the decisions that companies make about which investments to pursue and which ones to abandon – decisions which translate into, for example, how forests are managed or which drugs are developed (Doganova, 2014). Neglected also is a variety of supposedly non-financial activities, such as the formulation of corporate strategies and public policies, which have been gradually penetrated by the narrative and calculative technologies of finance – a movement that Chiapello (2015) has aptly described as the ‘financialisation of valuation’. Of crucial help for understanding the interplay of financial and social temporalities are studies that have documented the spread of financial forms of valuation, which reason in terms of capital, assets, return on investment, future flows, and discount rates, in a variety of settings ranging from accounting and capital budgeting decisions in firms (Levy, 2014; Miller, 1991) to environmental policies (Coffey, 2016; Sullivan, 2018; see also Birch and Muniesa, 2020). Accordingly, finance should not be understood as a place but as a movement, as the notion of financialisation suggests. Its analysis cannot be limited to that of financial markets and the actors that move in and around them (traders, analysts, economists, and so on). The analysis of finance must extend to the analysis of a peculiar form of valuation, characterised by the relationship it builds with present and future temporalities, and embedded in discourses and calculative devices that intervene in a variety of settings, way beyond financial markets. The notion of ‘capitalisation’ serves precisely such an extension, as it decentres the study of finance from financial markets and helps observe the transformation of objects such as entrepreneurial projects, scientific outputs, or hospital beds into objects of investment, prone to producing returns in the future (Muniesa et al., 2017).

Second, analytically, the critique of finance, whether concerned with the present or the future orientation of finance, tends to reproduce the categories of finance without questioning them. Bryan and Rafferty (2013) have convincingly shown the limits of this form of internal critique in their analysis of Marxist engagements with the notion of ‘fundamental value’, which have been trapped in the attempt to provide a better (understood as ‘truer’) definition of fundamental value and have thus become blind to how this category has evolved over time in the practice of actors operating in financial institutions. Their call for an analysis of “the changing way in which capital itself creates and evaluates its own performance” (Bryan and Rafferty, 2013: 134) can be interpreted as a call for a pragmatist approach to finance. Such an approach should be attentive to financial theories and practices alike. It should encompass the theories produced by economists and finance scholars, and the practices of the myriad of actors who compose what Bryan and Rafferty refer to as ‘capital itself’. A pragmatist approach to finance should also envisage the categories that finance uses to describe itself not as ready-to-use analytical resources, but as empirical realities that form the very object of analysis. The critique of the critique of fundamental value put forward by Bryan and Rafferty can be extended to other key categories of finance. One such category is that of ‘uncertainty’, which sociologists tend to treat in the same way as economists and finance scholars do: that is, as an analytical category that serves to describe an inherent epistemic characteristic of the future (Beckert and Bronk, 2018), rather than an empirical category whose construction and use require sociological examination (Doganova, 2018; Tellmann, 2016).

This article explores the implications of such a shift in empirical and analytical focus for understanding the temporalities of financial valuation and formulating its critique. We show that envisaging the temporality of finance as focusing on the present misses the fact that financial valuation presents itself as a critique of market valuation and its reliance on the

observation of current prices, and hence as a critique of the present. Financial valuation derives value from the future, but at the same time discounts the future and claims a reward for the risk that the future entails. In other words, financial valuation simultaneously values and devalues the future. Sociological approaches that envisage the temporality of finance as focusing on the future, however, tend to miss this contradictory relationship and instead focus their attention on how uncertainty is reduced and transformed into risk, without questioning the definition of categories directly borrowed from the repertoire of the economic and financial theories that sociologists aim at criticising in the first place.

The approach that we develop here proposes to regard financial valuation as a political technology that readily steps forward to be a valuation of the future and a critique of the present, yet equally to regard the concepts of ‘uncertainty’, ‘risk’, and the aforesaid ‘future’ (and of ‘value’ and its ‘creation’ too) as part of a rhetorical arsenal on which this political technology counts. We rely principally on Foucault (2004) as a compass to problematise ideals of ‘true value’ in the terms of a political technology, and build on previous attempts to conceive of financial valuation through this lens (Doganova, 2020; Muniesa, 2017). To problematise the categories of finance such as the future, and time more generally, we take inspiration from Alliez (1991) and his philosophical critique of capitalistic time.

This allows us to formulate a manner of critique in line with recent work in sociology, anthropology, and critical political economy that has started to question the temporal categories of finance and shed light on their problematic use by the social critique of finance. Tellmann (2016) effectively showed how the notions of ‘uncertainty’ that populate the interpretation of financial phenomena – such as financial ‘crisis’ – form in fact the prime epistemic vehicle for an intrinsically financial view of time, one in which the future is seen from the viewpoint of a particular economic subjectivity that has to seize it and secure it (see also Tellmann, 2017, 2020). Similarly, Konings (2018a) perceptively uncovered the dead-end that notions of ‘speculation’ represent for both vernacular financial thought and the social critique of finance, relying as they do on a fundamentalist epistemology of value that is simply at odds with the actual functioning of money in capitalist times (see also Cooper and Konings, 2015; Konings, 2018b; La Berge, 2018; Muniesa, 2018). Ortiz (2014a) introduced the idea of a limit, or perimeter, of financial imagination (i.e., the moral and political imaginaries that characterise financial valuation) as a way to highlight how concepts such as ‘investor’, ‘efficient markets’, or ‘crisis’, but also ‘value’ and ‘risk’, make sense only within a particular moral and political order of finance from which the social critique of finance often fails to emancipate itself.

Using this research as a starting point for our argument, we identify the critique of the present as an integral part of both financial imagination and the critique of finance. The first section introduces the paradoxes that the critique of finance faces when it expresses itself within the categories of finance and opposes ‘speculation’, put forward as the cause of crises, to ‘investment’ and ‘fundamental value’, envisaged as a guide for the virtuous orientation of capital towards the future. The second section turns its attention to financial imagination, as made explicit in financial professional parlance, and finds a similar critique of the present that links ‘value creation’ to the contemplation of ‘future prospects’. The third section then examines the historical roots and intellectual justifications of the definition of value as discounted future yields. It uses the case of forestry economics, which is one of the first instances of application of the principles of capitalisation beyond financial assets, to show that financial valuation was introduced as a critique of market value anchored in the present – a critique akin to the one proposed by some heterodox perspectives in economics and ‘presentist’ perspectives in social theory. We highlight the contrast that exists between the morals of expected future return and the morals of present trade. The future, we argue in the

fourth section, is an ingredient of financial valuation as a political technology. This perspective departs from contemporary approaches to the sociology of the future, which presuppose the future to examine how actors deal with its ‘uncertainty’ and form ‘expectations’, and invites us, instead, to explore how finance can produce an idea of the future that captures the sociological imagination. The fifth section introduces a few resources that might be helpful in such an exploration, which requires developing an analysis of time as both a part of and an effect of the deployment and handling of capital. The conclusion summarises the main points of our argument regarding financial temporality and valuation, and comments on the attention this debate requires in both finance and its social critique.

All that is not investment is subversion

Our reflection finds a useful illustration in the context of the paradoxes characterising the critique of finance as observed after the onset of what has come to be called the ‘financial crisis of 2008’, followed by the ‘European debt crisis of 2010’. It is clear that those episodes prompted an intensification of critical pronouncements both in specialised spheres and the mass media. Thirst for profits, speculation, perilous bets, lack of cool-headedness, contempt for public good or short-sightedness were all highlighted as primordial traits of the financial logic that governs the functioning of the banking system. Despite its virtuous intentions and in some cases notable radicality, this criticism, and the interpretation of the notion of ‘crisis’ on which it is based, recurrently found itself within the ‘limits of financial imagination’, controlled by the logic of a ‘foundational’ approach to value, and tinged with the ‘economic subjectivity’ the discourse on financial uncertainty requires. In effect, this critique of finance is based on an essentially financial interpretation of the crisis: a crisis that consists of, in short, a breakdown of ‘trust’ in the markets, investors being unable to know, in the midst of ‘uncertainty’, the ‘real value’ of a series of assets which had been ‘over-valued’; and the solutions to this breakdown basically aiming at a restoration of the ‘transparency’ of markets and the resilience of banks. Against ‘speculation’, which translates into the erratic value of financial assets – an eminently ‘fictitious’ value, it is said – the spirit of ‘investment’, more attentive to the ‘fundamental’ value of the assets being invested in, is invoked. And it is precisely this argument which takes root at the centre of financial imagination: the argument that there is a ‘fundamental’ value of things, which is distinct from a ‘speculative’ value and whose apprehension requires the foresight of an investor able to see into the ‘future’ and in this manner reduce uncertainty, estimate a return on the investment, and justify its cost.

‘All that is not investment is subversion’: a very apropos motto that encapsulates this imagination, and which features in a cartoon by the artist El Roto published in the Spanish newspaper *El País* on July 6, 2015.² An executive, perhaps a banker, advances confidently, declaring this dictum loudly. We cannot know exactly what Andrés Rábago (the artist who signs as El Roto) was thinking of when he came up with this cartoon. Perhaps it was Greece. July 6, 2015, was the day when the results of the referendum on the austerity plan that the so-called ‘Troika’ (the European Commission, the European Central Bank, and the International Monetary Fund) had offered the government of Greece in return for a monetary bailout plan were due to be announced. The ‘No’ vote triumphed, a result the Tziras government said it was obliged to recant just a few days later. Let us remember that the ‘No’ was a ‘no’ to the conditions presented as generally required for the Greek economy to be in a position to ‘attract investors’. This objective of ‘attracting investors’ able to ‘create value’ is posited nowadays, we observe, as an essential task for all economies and all governments responsible for developing these economies.



Figure 1. El Roto, 'All that is not investment is subversion'. Source: *El País*, 6 July 2015.

El Roto appears to have masterfully captured the paradoxes of the critique of finance here. The subversive thing is to not create value, in other words, to speculate. The non-subversive thing is to create value, in other words, to invest. The enemies of value are those who do not recognise the fundamental value of things because, it is implied, they do not think of the future. They are in the business of spurious presentism and should be contained. But this is exactly what the virtuous investor is saying, who El Roto sarcastically depicts wearing the executive attire which symbolises the '1%': the enemy of the '99%' thus comes readily to give lessons about what is or is not subversive. His pronouncement, however, is the one that the critique of finance often endorses, implicitly or explicitly: a critique that desires capital to be directed towards that which matters, towards the real, towards that which forges the future and that which creates value. Hence, it is a critique that expresses itself with the concepts the financial imagination has given it.

The political semiotics of value creation

Moving forward in the analysis of these paradoxes and contradictions requires an understanding of the use made of the concept of the 'future' in financial valuation. This is closely entwined with the concept of 'value creation' and the political and moral narratives that bestow it with meaning: moral in the sense of being about identifying the true value of things, and political in the sense of being about deciding what should be done in consequence of this truth (Doganova, 2020; Muniesa, 2017; Ortiz, 2014a, 2017). Numerous sources demonstrate the extent to which the notion of value creation is saturated with moral content: a virtuous estimate of the value of things leading to a no less virtuous decision about whether or not to finance them, how, and why. The weekly magazine *The Economist*, reputed for its relevance in the area of professional finance, offers a useful definition that provides an understanding of how this is related to a critique of the present.

Value creation, we are told in the entry for a guide about management ideas published by *The Economist*, is a company's 'raison d'être', the ultimate measure by which it will be judged (Hindle, 2008: 201-202).³ Immediately after, the difficulty of effectively setting up this measure up is introduced. A range of techniques are available, a number of rationales too, some better than others. One such is 'the market', but there is a problem:

Markets are moved by sentiment that has little to do with the underlying value of individual corporations. The dotcom frenzy at the end of the 1990s was proof of this. Small new internet firms were suddenly lifted into the stratosphere by investors' enthusiasm for their stocks. But their underlying value throughout the frenzy remained more or less unchanged. (Hindle, 2008: 201)

What is the problem? The stress is put on the subjective, on the psychological, on the disorder and spuriousness of collective emotions, impressions, and opinions. Opposing this is something called 'underlying value'. In the professional jargon of financial analysis, this is also called 'fundamental value', and it constitutes a kind of valuation overtly different from what the profession calls 'market value' or 'speculative value'. The author goes on to explain how accounting is the natural way of assessing 'fundamental' or 'underlying value', since it contributes a measure of what the company really consists of in terms of worth. Nevertheless, this solution is not entirely satisfying, as the author reminds us:

However, any measure based on book value has to get over the fact that accounting measures are not carved in stone. They can (and do) differ from country to country. It is also stymied by the fact that book values fail to take full account of intangible assets – things you cannot kick, like brands, patents or partnerships. (Hindle, 2008: 201)

The author points out that a third technique, ideal despite its limitations, consists in looking at the company from an investor's point of view, that is, looking towards the return the investment will bring in the future:

Measures that attempt to value a company based on its future prospects are no easy alternative. They soon run into the difficulty of quantifying what those prospects are. The popular idea that a company is no more than the net present value of its future cash flow depends on guessing first what that cash flow is going to be, and then what future interest rates are going to be. Interest rates are used to discount those cash flows and calculate their present value. However, these measures do have the advantage of being independent of accounting rules, so they can be used to compare companies in different industries and countries. (Hindle, 2008: 202)

The central idea here is to locate 'present value' as it is referred to in the language of financial analysis. Clearly, this value is not derived from the present, but from what the author calls the 'future'. In order to be 'created', it requires being contemplated from the investor's point of view in anticipation of a future yield. However, uncertainty and difficulty are part and parcel of this anticipation, and for this reason, in addition to being estimated, future value must be discounted, in other words, reduced in order to reward the uncertain waiting. True, 'market value' – particularly when featured in the terms of a 'speculative value' for which today's prices in the market acquire meaning in light of how they may rise or fall in the future – is certainly also prone to some sort of forward-looking anticipation. However, this future (of the market) differs substantively from that of 'fundamental value' (of the asset), being as it is entirely subjected to the game of market opinion, as opposed to the rule of discounted cash flow and the investment logic of 'value creation'.

Therein lies, in a nutshell, the financial critique of the present, just as it has been described in a myriad of corporate finance textbooks (e.g. Berk and DeMarzo, 2007; Brealey, Myers and Allen, 2011; Damodaran, 2001). Undoubtedly, this argument picks up on a crucial idea from the financial view of time according to which 'a dollar today is worth more than a dollar tomorrow'. Presented in this manner, it seems more like a valuation of the present and a devaluation of the future, that is, a critique of the future. However, the full rationale outlines how to estimate the inherent present value of something, which is unequivocally determined

by what the future will, or might, bring. The thing that is devalued is a future that brings nothing, or very little: that is to say, an investment that pays less than the proverbial 'risk-free rate' that the investor could obtain by deciding not to invest (Boy, 2015). The core of the method effectively lies in investing in assets that will be valued not according to their price in the market today, but rather their capacity to 'create value' tomorrow (Muniesa, 2017).

Financial assets are indeed bought and sold in today's market, at today's prices, which implies a flow between these two different ways of perceiving their value (Birch and Muniesa, 2020). The paradoxes connecting 'fundamental value' and 'speculative value' are well known. They have even been described on the pages of some of the most widely circulated finance textbooks (e.g. Brealey and Myers, 1981: 256-273; Brealey, Myers, and Allen, 2011: 321). The main paradox may be summarised as follows: if markets are frequented by rational financial analysts who calculate fundamental value accurately, then the market price will in effect have to reflect this fundamental value and it may thus be said that these markets are informationally 'efficient'. But in that case the financial analyst becomes redundant, since the fundamental value may be obtained by simply taking the market value. This paradox needs to be solved, indeed, if one wants to defend the need for professional financial analysis that formulates fundamental valuation and guides investment decisions accordingly (Ortiz, 2014a). It is thus usually solved by claiming that market efficiency is a working hypothesis: a sought-after yet hypothetical state which might eventually be reached in the future, but whose fulfilment in the present is not entirely guaranteed. In any case, at least a portion of the analysts who populate the market should keep on using these particular decision-making technologies and be remunerated for that. An investment bank is undoubtedly an organisation in which several points of view are continually shuffled and combined. Some employees 'look into the future', so to speak, and estimate fundamental value; others 'focus on the present', devoting their time to identifying arbitrage opportunities, developing short-term speculative strategies, or using automated 'high-frequency trading' methods (Ortiz, 2014a). Nevertheless, the nucleus of financial reason revolves irremediably around a value that must be observed from the future in order to be created.

Critique of the present and critique of finance

There is one thread in the history of financial thought in which the intrinsic theory of time installed in these valuation techniques is tinged with a somewhat metaphysical aspect. The notion of the discount rate is associated with authors such as Irving Fisher and their extremely far-reaching conceptual constructions, such as that which postulates that any object under valuation possesses a kind of inherent discount rate that enables its true value to be expressed (Doganova, 2014; Muniesa et al., 2017; Nitzan and Bichler, 2009). The efficacy of the metaphors Fisher must resort to in order to defend his idea highlights the proportions of the pedagogical challenge he faced and the difficulty of overcoming objections from readers who, naturally surprised, could not avoid finding all this slightly peculiar:

It is not because the orchard is worth \$20,000 that the annual crop will be worth \$1,000, but it is because the annual crop is worth \$1,000 that the orchard will be worth \$20,000. The \$20,000 is the discounted value of the expected income of \$1,000 per annum; and in the process of discounting, a rate of interest of 5 per cent is implied ... The orchard produces the apples; but the value of the apples produces the value of the orchard. (Fisher, 1907: 13-14).

Such images can be interpreted as a kind of audacious demand for the emanation of value in the future, an emanation that requires overcoming a certain short-sightedness: it is necessary, says Fisher, to overcome the bewildering causal connections between what has happened in the past and what happens in the present. It is also necessary to stop being stuck within the present. Nothing could be further away from this reasoning than to think that the value of the orchard is the price that can be given for it in today's market. This style of theoretical message fuels an intellectual justification for the vocabulary of 'value creation' that is the hallmark today of the culture of financial valuation. And yet, remarkably, it is within the very idea of the market that the critique of finance referred-to above appears to find, to a great extent, its main rhetorical resource. According to this critique, 'financial speculation' would be characterised by an excessive commodification of things, by a regime of market value: a short-sighted value precisely because it holds present 'market value' in primacy over future 'fundamental value', that is, false value over true value.

The perspective found in some 'heterodox economics' is particularly eloquent in this regard. André Orléan, for example, one of the foremost economists of this movement in France, is known for his emphatic theorisation of speculative logic: the world of finance is portrayed in his analyses as a dominion of opinion, easy prey for specular (read pathological) mechanisms of mimetic desire (Orléan, 2011). There are many questions that can be raised about the kind of theory of social order that such a view requires, which stipulates the pre-eminence of the idea of the herd in the understanding of social life (Aglietta and Orléan, 1982). What is important here, though, is to observe the way in which the speculative aspect of finance is delved into. Keynes' proverbial 'beauty contest', a recurring rhetorical device in this type of approach, does nothing but emphasise more strongly the idea of financial value being essentially dictated by the interplay of prices with the anticipation of other prices (Muniesa, 2016).

Such a critique of finance finds comparable expressions in other quite different quarters, marked by a leaning towards the mercantile in disquisitions on contemporary capitalism. This is the case, for example, with 'presentist' perspectives in social theory, i.e. perspectives that equate modernity with a dissolution of temporality (Ramos Torre, 2014). Fredric Jameson plays a central role in this area. He does not hesitate to point out the emergence of an 'end of temporality' in the culture of financial markets, a culture made up of "anxious daily consultations":

The narrowing and the urgency of the time frame need to be underscored here and the way in which a novel and more universal microtemporality accompanies and as it were condenses the rhythms of quarterly 'profit-taking' (and is itself intensified in periods of crisis and uncertainty). (Jameson, 2003: 704)

Finance equals here the speed and disorder of the market, rather than, say, capital budgeting and portfolio insurance, that is, techniques that aim to protect the investor from the vagaries of the market. Comparable critiques can be found in debates on 'acceleration' and 'high-speed' society (Rosa and Scheuerman, 2009). The condemnation of the 'end of temporality' – i.e., temporality collapsing into a series of instantaneous events – corresponds indeed to a vindication, albeit nostalgic, of the prospect of 'value creation', defined as the act of taking into account the future, after having appreciated the right amount of risk associated with this, in essence, uncertain future. 'Investing', therefore, rather than 'speculating'. In other words: creating real value, stimulating the fundamental value of assets, mistrusting appearances, not gambling with money, not condensing time, not subverting the economy. 'All that is not investment is subversion': the expression applies quite aptly to the political spirit that may be detected in this type of critique of finance.

How did such a peculiar idea of the valuation of the present being subversive come about? In his work on the role of engineers in the building of economic science, sociologist and historian François Vatin contributes some important clues that can help to clear up, if not the circumstances, then at least the distinctive trail of this mode of appraisal. His analysis focuses on eighteenth-century France, and in particular on Turgot, an economist who served in the French government during the reign of Louis XVI, and who was known for his economic liberalism and defence of free trade (Vatin, 2012). Vatin regards the core of Turgot's position as being based on an ideal transaction between people who are present in the present. This position, Vatin suggests, may be observed in a particularly explicit manner in Turgot's critique of the notion of 'foundation' (or 'fund') that can be found in Diderot and D'Alembert's *Encyclopaedia*. The fund-qua-foundation represents, in effect, the supreme expression of an institutional device to censor free discussion between people present when it comes to responding to the question of what should be done, in all respects (with the money). The response to this question is unequivocally controlled, Vatin stresses, by the sovereign will of the 'founder', someone who speaks from the past and who has entrusted part of its wealth to others with the aim of bringing it to fruition in the future:

A founder is a man who seeks to make his will eternal. Even if his intentions are virtuous, though, how can we trust his intelligence? ... Forecasting with certainty the extent to which an establishment will incur the desired effect and not the contrary; seeing through the illusion of a near good the actual evil that a long chain of causes may bring; knowing the actual ills of society and their causes ... all this would require an omniscient genius. (Turgot in Diderot and D'Alembert, 1757: 72, our translation)

Elsewhere, Vatin (2005) suggests that Turgot's critique of the foundation could be extended to an issue that was vividly debated in his days: the management of forests. The life span of a tree exceeds that of the individual who plants it. Seen through Turgot's eyes, planting a tree would then not be an act of altruism, but an act of hubris, for it involves the belief that other people, who have not yet come into existence (the proverbial 'future generations'), would one day need the services provided by this tree. In contrast with such a view, debates on forest management in the eighteenth century, driven by the problem of timber shortage and the overexploitation of forests, developed a critique of market valuation and the lure of short-term gains (Hölzl, 2010). A few pages after Turgot's article on the 'foundation', we can find the entry that the *Encyclopaedia* devoted to the 'forest':

If it is used for present needs, it also has to be conserved and prepared well in advance for the next generations ... Owners are in a hurry to benefit from their forests ... Public vigilance thus has to oppose the ill-advised avidity of individuals who would wish to sacrifice the duration of their woods to the enjoyment of the present moment. (Le Roy in Diderot and D'Alembert, 1757: 129, our translation)

As is well known in the history of financial management, the problem of value in forest management may be found at the root of the technical arguments that led to the formulation of discounted cash flow models, particularly in Germany, but in France too (Doganova, 2014, 2018, 2020). That problem was defined through the opposition between the 'market value' of forests (the price at which the timber cut from the forest could be sold now) and their 'economic value' (the future yields that the forest might generate if its trees are left to stand). The defence of economic value – that is, of future value or, in more contemporary terms, of value creation or fundamental value – was an attack against the valuation of the present. Turgot, as Vatin shows, epitomises the resistance to such attack, within the forestry debate and beyond: defending the position of a righteous negotiation of value in the present of today's

marketplace against the all-encompassing logic of a foundational, fundamental sequestration of the future.

A liberal critique was thus at work, in the form of a defence of the government of things through the participation of whoever is present in the present, in the face of the emerging techniques of capitalistic future prospect (i.e. the discount rate) that, in turn, embodied a critique of the ‘presentist’ vices of the market. It seems clear that the matter is one of opposing political technologies: in other words, of techniques to collectively decide what should be done (about trees or indeed anything else), and to justify the reasons why. Cutting down trees freely to use or sell the timber serves here as a significant example of what one should not do, if one envisages forests through the lens of ‘value creation’ and searches for their ‘fundamental value’, that is, their value in terms of capital rent and not in terms of market trade. Putting money somewhere as just a market bet, without properly gauging future returns and without properly protecting the long-term interests and controlling power of the proprietor of capital, ought to be considered, accordingly, as a form of sheer irresponsibility.

Financial future as political technology

One can talk about political technology in this sense in a way similar to Michel Foucault, that is, as a method of organising and governing things that requires the use of a type of knowledge, the validity of which is accompanied by moral approval. Foucault was interested in the relation between what he called ‘veridiction’ and ‘governmentality’, in other words, between the methods by which truth and untruth are determined in a specific historical configuration, and the ways decisions regarding what to do or not are to be best made (Foucault, 2004). The world of finance offers abundant materials allowing this relationship to be analysed (see de Goede, 2005; Langley, 2006; Boy, 2015; Tellmann, 2016). In effect, financial valuation also presents itself as a technique to identify the true value of things and as a method to decide which things should be financed and which should not, and, accordingly, which things should exist and which things should not (Doganova, 2014, 2018, 2020; Muniesa, 2017; Muniesa et al. 2017; Ortiz, 2013b, 2014b). We already know that the use of the future is a vital component of this political technology. Perhaps one of the most refined descriptions of finance as a political technology is that given by Lawrence Summers, an acclaimed economist who has extensive experience serving in positions of political responsibility, in a speech he delivered to the banking community:

There are two broadly different views that thoughtful people take about financial systems ... The first view holds that there is production of real things and then there is transacting and financial claims, that real things have real value, that transacting in financial claims is a zero-sum gain, carried on by paper entrepreneurs to relatively little social benefit. The second view, and the view that I think increasingly needs to be understood in our body politic, is that the task of a financial system is to make the most important decisions that society makes. Where is its capital going to be allocated in the future? How is the use of that capital going to be monitored when it is entrusted to particular individuals and particular institutions? How much of society’s resources are going to be allocated to the present and how much are going to be oriented to the future? And that is very much what financial systems are all about. (Summers, in a lecture given for the bicentennial celebration of the London Stock Exchange, 2001, quoted in Buchanan, Chai, and Deakin, 2012: 47)⁴

This declaration takes us to the epicentre of the political technology being analysed here. The issue is about, we read, making ‘the most important decisions that society makes’: decisions that society cannot make by itself and that the financial industry must make on its

behalf. We also read that these decisions are in essence decisions about the ‘future’: the very viability of society, in the future, depends on decisions made in the present about the allocation of money, i.e., investment policy. To leave these decisions in the hands of a negotiation between people in the present (in a sense, that is, to ‘society’ itself) implies exposing society to the possibility of an irresponsible decision, of dilapidation and of a lack of foresight. To protect the investment, which in these terms is the same as protecting society, involves conferring the decision-making power to the professional body able to reasonably estimate, through appropriate valuation techniques, the intrinsic uncertainty of any investment. Our ‘body politic’, we also read, must consider this view attentively in order to prevent any subversion of the future.

The extent to which this concept of the ‘future’ constitutes an external reference point that reasoning can cling to is debatable (Tellmann, 2016). We should rather consider this concept as one of the main ingredients of the rhetorical arsenal deployed by a financial perspective: the underlying component that supports the very idea of ‘value creation’. This way of presenting things implies taking some distance from the sociological perspectives that have made theirs the vernacular problem of the necessary reduction of uncertainty in economic action. The approach developed by Jens Beckert deserves special mention here (Beckert, 2013, 2016; Beckert and Bronk, 2018; but see also Esposito, 2015; LiPuma, 2017). This author provides probably the most polished articulation of an economic sociological perspective mindful of the ‘conventions’ that social actors need to develop in order to confront the eminently uncertain nature of what the future will bring. The world of finance, which Beckert portrays in a manner closely resembling those theories of speculation posited in some ‘heterodox economics’ (Orléan, 2011) or the sociology of financial futurity inspired by Niklas Luhmann (Esposito, 2011), is viewed as a professional world whose main problem lies in confronting an uncertain future. The economic hypothesis of ‘rational expectations’ is not enough, Beckert tells us, since a sociological observation of the available techniques for making uncertainty calculable, and consequently transforming it into risk, clearly reveal their limitations. Thus, one needs to take into account the existence of narrative and qualitative constructions (‘fictional expectations’) that allow grounding a projection of the future on shared imaginary contents. One can discern in this type of view the importance of the categories famously proposed by the economist Frank Knight – ‘risk’ and ‘uncertainty’ – in what was none other than an essay on return on investment (Knight, 1921). Yet, above all, one can also observe that the starting point consists in taking on board the quintessential problem and terms of an investor’s rationale.

Relocating the ‘future’, and its corollary, ‘uncertainty’, inside the core of financial political technology rather requires that we characterise this way of problematising and, accordingly, of justifying things (Tellmann, 2016). What types of future and what types of time does this way of looking at the world require? It is a narrated time, an imagined time. But, first and foremost, it is a type of time that is saturated with power: the power of a ‘founder’, of a fund, of an owner of capital, in other words, of an investor who points the way towards the maximisation of value creation. In his work on financial imagination, Horacio Ortiz signals in this respect what all doctrines of ‘shareholder value’ intrinsically imply: namely, that the future of an investment belongs to the investor (Ortiz, 2014a, 2014b, 2017). Time, moreover, when thus planned, is of a linear kind: a time that progresses; the time, therefore, of a ‘project’ that points towards the future of its fulfilment, a potentially virtuous outcome, such as an ‘innovation’. It is also a time that can, and must, be measured. Typically, it contains landmarks: milestones, deadlines, foreseen junctures at which accounts can be verified and expectations corrected. It is, therefore, a time that is susceptible to taking the rhetoric of risk on board: the risk taken, it is

assumed, by an investor, a risk that needs to be covered in order to insure the expected profits (Birch and Muniesa, 2020).

The various rhetorical expressions of the notion of the future identified by Ramos Torre (2009) can be applied quite satisfactorily to the use being made of it in the financial sector today (see also Ramos Torre, 2017). The future appears sometimes as a static environment in which occurrences may be placed (certain, probable, uncertain, or unknown) and that is deployed continuously and regularly, subjected to calculation and dating. It can also feature as a dynamic resource, that is, a resource in the hands of someone who can appropriate it and make decisions about it. And it can in addition be considered as a kind of horizon, something not possible to apprehend, but which can be imagined, narrated, and contemplated. A sociological analysis of the use of the future in finance can very well serve the examination of the undeniable presence and significance of these various themes (Kloeckner and Mueller, 2018). Nevertheless, the argument we are forming here does not intend to contribute so much to a sociology of how the future is viewed from a financial perspective as to an anthropology of how finance can produce an idea of the future that captures sociological imagination.

The time that money requires

Our argument does not aim to concur exactly with what has already been said about the myriad types of futures and their characteristics in modern temporality. That the modern semantics of time are concomitant to the advent and expansion of money and the capitalist economy has been sufficiently established in the literature on the subject. The consistency between studies by Le Goff (1957, 1977, 1986) and Thompson (1967), in addition to the developments provided by authors such as Glennie and Thrift (2011), have solidly established that ideas of modern time are linked to ideas of modern money. Our proposal goes somewhat further and aims to be somehow more radical: seeking not to explore the time of capitalism but instead the capitalism of time, that is, dropping ‘future’ and ‘uncertainty’ as analytical concepts and examining them instead as vernacular categories of financial practice and theory. This requires, evidently, a theorisation of the question of time that allows it to be seen not as the medium in which financial valuation operates, but rather as an artefact of the latter. This means considering time as both a part of and an effect of the deployment and handling of capital. This is a sensitive task, which cannot be undertaken without philosophical resources.

Some useful clues along these lines are to be found in the constructivist tradition of contemporary philosophy. The work of Éric Alliez (1991, 1999) may definitely be viewed as an appropriate instrument here. Alliez seeks to demonstrate the degree to which a particular concept of time was constructed in the ancient and medieval traditions of Western philosophy, a concept that coincides with the notion, turned natural, of the time of economy, and that requires, in order to acquire meaning, the formation of a particular notion of money: in short, a notion of capital. Originating in Aristotelian thought on chrematistics, the invention of this idea of time would have gradually evolved towards more or less organised forms of the quintessentially financial motto of ‘time is money’, attributed, as Alliez points out, to the author who according to Marx was the true father of political economy: Benjamin Franklin.

The notion of capitalisation, used in a way similar to that we have developed ourselves elsewhere (Doganova and Muniesa, 2015; Muniesa et al., 2017), is central in Alliez’s research. Capitalisation is here understood in the sense of the act of considering something in terms of capital: a semiotic operation that requires the prior production of a concept of time as the time of monetary investment. ‘Abstract’ time, writes Alliez, appears as what makes this semiotic process work:

Capitalization is a futuristic conquest of time. A chronothesis. That is what chrematistics is about. For Aristotle it is literally a question of time: the business of a time that generates simulacra, the fiction of a 'non-wealth', *at a distance from the polis*, far from the equilibrium of property. It refers, in short, to a depoliticising (de-realising) anticipation that may derive gain from exchange precisely because it precedes the very possibility of monetary equivalence, situated as it is on the tangent of the space of comparison and of the appropriation curve that it holds and envelops. (Alliez, 1991: 44, our translation).

In other words: for Alliez, the craft of monetary value-making is responsible for producing a certain idea of time, and not the other way around. The very idea of a monetary appraisal of things seems to require, within this perspective, the semiotic engine of capitalisation: one capable of defining a space of acquisition and rent (for a comparable perspective, see Seaford, 2004). Which, in turn, requires imagining an idea (a 'fiction') of what is outside that space: a space of 'non-wealth', a space of 'non-value'. Which, in turn, produces or transforms ('conquers') a certain idea of time, precisely that according to which 'time is money': a time which shall be busy with, and devoted to, the productivity of value. It is consequently the idea of capital that bestows the economic idea of time with its characteristic underlying politics: 'abstract' time emerges as the fence protecting 'society', a fence erected in order to insulate it from the dangers of a 'non-value' periphery, a periphery where the use and appropriation of things could be considered as, say, a matter of negotiation between whoever is present, rather than as an arithmetic encapsulation of things in time (see also Alliez and Lazzarato, 2016; Guattari and Alliez, 1983). This theorisation resonates with recent works by historians of economic doctrine such as Giacomo Todeschini, who has studied the interlinked conceptualisations of economic value and religious time in medieval Christianity, and the suspicions this interlinkage prompted towards 'peripheral' social groups accused of economic 'harshness' or 'cruelty' in the use of money, such as in 'usury' (Todeschini, 2002, 2007). With regard to our argument, whose objective is not to explore the history of economic ideas, it suffices to verify the extent to which this series of intuitions tallies with the type of imagination that the conceptions of value we have explored thus far do entail. A case in point is the political technology described by Larry Summers that certainly requires, as we see in El Roto's cartoon, a demarcated space for investment that is protected from the subversion that lurks on its fringes, 'non-value' fringes where wander those who have still not acquired the intuition of value creation, fundamental value, or discounted future value.

In addition to these resources, one may undoubtedly mention other tracks laid down in the context of philosophical quarrels on the secularisation of time. In his brilliant reading of Walter Benjamin's theses on the concept of history, Michael Löwy (2001) stresses, for instance, the contrast that exists between a quantitative and accumulative concept of time and the discontinuous and qualitative concept of time sketched out by Benjamin. Löwy insightfully refers to Charles Péguy, an author with whom Benjamin said he felt a close affinity, and one who also provided, in his particularly tragic and tortuous style, a reading of capitalisation's imprint on our naturalised use of the notion of the future:

This is ... the time of the savings bank. The time that we so fraternally exercise since primary school with the rule of three and the calculation of interests: a scale of interests. 'Sir, you have to multiply the time by the rate and then divide by 100'. It is the time of the evolution of interests paid by capital, the time of anxiousness about payment instalments ... Hence appears once again this truth ... that there is an affinity, a profound kinship bound between ... the process of the modern world and the process of capitalism and money. (Péguy, 1932: 50-51, our translation)

We can, indeed, easily recognise a certain idea of capital in the intuition that is naturally expressed in the mundanely used notion of time when it enters the jurisdiction of economic

necessity, such as when we say that ‘time is money’ as a way of convincing ourselves not to waste it. Similarly, we can also commonly observe how a virtuous space within which this idea is contained may be delimited in this fashion, a space that must be defended from things such as financial illiteracy, customary law, as well as market dilapidation and the useless, corrosive, and irresponsible speculation that does not create value. The idea is not new, and neither is its critical appraisal. Expressions of scruple or dismay in the face of these moral and political semiotics of value creation abound in history. We are opportunely reminded that this critical intuition can be found, for example, in some pages by Cervantes.⁵ Rafael Sánchez Ferlosio observes how Sancho Panza, Don Quixote’s squire, appears to surreptitiously access this fringe of ‘non-value’, removing himself from the ‘jurisdiction of hunger’, when the cook at a wealthy man’s feast tells him to look and see if ‘there is a ladle somewhere here’ in order to approach the pot and skim off ‘a chicken or two’:

In the ‘jurisdiction of hunger’ ... rules the bureaucratic principle of ‘a place for everything, everything in its place’, and it is intolerable that the ladle is not where it should be. Chickens are counted, controlled, and not only in case ... they become scarce and must be rationed, but also in case one year is prosperous in excess ... and the surplus has to be sacrificed for the sake of what is usually called today ‘value creation’ ... Somebody asked in a newspaper how it could be possible that, in our world of ‘value creation’, hunger ... had not been significantly reduced. But the fact is that there is an inescapable antagonism between so-called ‘value creation’ and the cure for the scarcity of life-sustaining resources. (Sánchez Ferlosio, 2010: 295-296, our translation)

Conclusion: Time inside financial imagination

Temporality features as a complicated, paradoxical element in both the vindication and the denunciation of finance, of finance in general and of financial ‘value’ in particular. An excessive emphasis on the ‘present’ is often signalled as finance’s main trouble: a reckless focus on instantaneous time, a lack of consideration for the long term, a hazardous subversion of economic responsibility. Financial value is then understood in the terms of spurious market fads, and of a speculative logic essentially disrespectful of a sound appraisal of the actual value of things. A turn towards the ‘future’ is accordingly defended: not towards the future of anticipated market prices, but towards the future of the fundamentals of investment, a future that brings value, which is the future of ‘value creation’. This critique of the market, though – a critique of the logic of ‘market value’ or ‘speculative value’ – fully coincides with the precepts of financial valuation proper: those who look at the ‘fundamental value’ or ‘underlying value’ of things, understanding by that a forward-looking conception that sees future value, and certainly not the market (unless the market amazingly agrees on the fundamentals) as the basis for any legitimate appraisal of present value. For this idea of future value to make sense, however, agreement is needed on the fact that the future is ‘uncertain’ and that this uncertainty needs to be properly taken into account when investing into the future, specifically through the discounting of expected future value. This financial insight is often reinforced by a sociological approach, which takes at face value this forward-looking conception of value and explores its qualitative nature, and by a political critique that claims that the prime problem – for example, in a situation of ‘crisis’ – is that of the correct appraisal of the true, fundamental value of things.

How shall these paradoxes be decoded? The suggestion we have offered here consists in considering temporality and its corollaries – that is, notions of ‘present’ and ‘future’, but also ‘risk’, ‘uncertainty’, and even ‘value’ and ‘value creation’ – as discursive elements operating within financial imagination and, ultimately, as components of a political technology which

determines where money should go and what things should be. We observed, first, how such discursive elements work in the contemporary vernaculars of ‘value creation’ but also in the critique of finance. We then examined the emergence of critical contrasts between the ‘present’ and the ‘future’ in early valuation controversies, especially in the case of forestry. Finally, we advanced some conjectures about the kind of anthropological and philosophical disposition that would require extracting financial notions of temporality from the repertoire of the sociological analysis of finance, in order to analyse their semiotic politics. Rather than exposing financial conceptions of time or analysing capitalist temporal structures, one can argue, paraphrasing Deleuze’s preface to *Alliez* (1991: 7), that our task would amount to the examination of the ‘conduct of time’ that financial imagination requires, at once questioning – and escaping – the subordination to that conduct in the sociology of finance.

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Notes

1. ‘Quarterly capitalism’ refers to managers’ and investors’ focus on companies’ quarterly earnings. Quarters form the pattern of public companies’ financial calendar because they determine the production of performance reports (the quarterly earnings reports) and the paying of dividends.
2. The cartoon is available online from *El País* at: <https://elpais.com/elpais/2015/07/03/vinetas/1435916188_749901.html>. Page dated 6 July 2015, accessed 23 April 2020. It is also reproduced in *El Roto* (2016: 21).
3. The entry is also available online from *The Economist* at: <<https://www.economist.com/news/2009/11/20/value-creation>>. Page dated 20 November 2009, accessed 23 April 2020.
4. The speech Larry Summers delivered to an audience gathered at an event to celebrate the bicentenary of the London Stock Exchange was available for a while on the web. Its subsequent removal from the public domain may be due to qualms about Summers’ position in relation to the financial chaos that was unleashed in 2007 as a result, in part, of the liberalisation policies in the finance sector that Summers had advocated for. We quote it here from a copy archived by Simon Deakin, who has cited it in numerous works.
5. We are grateful to Ignacio Sánchez de la Yncera for drawing our attention to this and for providing us with a copy of Sánchez Ferlosio’s interpretation.

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