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Conclusion

What finance manufactures

Olivier Godechot

Why should we approach the study of finance in an alternative way when other disciplines – such as economics and financial theory – which are older, more legitimate and endowed with more substantial backing, have already been tackling this subject for over fifty years? Admirably, despite any misgivings, the rapid and varied development of a collection of studies on finance has nonetheless originated over the last fifteen years from a variety of disciplines (sociology, anthropology, political science, history, management sciences, geography). This has resulted from the dynamic academic practice of diversifying and reviving research subjects, though also because of a dissatisfaction with the inadequacy of standard approaches. But that is not all, as it has equally stemmed from a desire to understand a much deeper phenomenon: the sudden emergence of finance in social life.

This research, at times grouped under the heading of the 'social studies of finance' – underlining its multidisciplinary nature and its relationship with the social studies of science – and other times grouped under the heading of 'sociology of finance' – underlining its relation with economic sociology – was notably developed out of several events which included a seminar held in France,[1] regular international encounters, the setting up of an electronic mailing list and the publishing of several special editions of academic journals,[2] in addition to some collective works (Knorr Cetina and Preda, 2004 and 2012). Beyond the paradigmatic, theoretical or methodological diversity of this research, we can find a common approach: to study finance not only as a

[1]. Originally, the expression Social Studies of Finance (*Etudes Sociales de la Finance*) was used in France to group together a collection of social science approaches dealing with financial markets, which offered alternatives to the dominant financial and economic theories. This entry via science and technology studies, inspired by research from Callon and Latour, was a strong initial component but not the only one. Later, certain authors had a tendency to identify the Social Studies of Finance in relation to this unique approach.

[2]. Notably issue 52 of *Politix* (2000), issue 21 of *Réseaux* (2003), issues 146–147 of *Actes de la Recherche en Sciences Sociales* (2003), issue 63-1 of *L'Année sociologique* (2013), and finally the issues 92 and 93 of *Sociétés Contemporaines* (2013 and 2014).

subject in itself, but also as a symptom of the contemporary financialisation of societies and their transformations. By studying the making of finance, we also study the magnitude of that which finance itself makes. Within these pages, we address the mechanisms and the social practices of contemporary capitalism that are often more visible in finance and are quite commonly disseminated across the rest of the economy from this financial hearth. After presenting research on contemporary financialisation, we demonstrate how the social studies of finance highlight three emblematic trends related to contemporary capitalism. These are, the – depoliticising – institutional policy of market order, a new knowledge regime combining academic knowledge with non-expert knowledge, and finally, the systematisation of 'greed'.

Approaching financialisation

Since the beginning of the 1980s, the financialisation of the world's economy has paradoxically manifested as a trivial phenomenon experienced by the whole world as part of everyday life, while at the same time being a difficult phenomenon to clearly define, measure or explain. First, both the outline and the definition of financialisation are difficult to establish precisely. Common proxies for this phenomenon include an increase in finance's share of the gross domestic product (GDP), profit or wages (Godechot, 2012 and 2013; Krippner, 2005; Philippon and Resheff, 2013; Tomaskovic-Devey and Lin, 2011). One could be led to believe that a large portion of traditional finance (e.g. retail banking) is not relevant to this trend, as this concept brings to mind first and foremost the growing importance of financial markets in our modern-day societies. A provisional Durkheimian definition of financialisation may be the growing amount of social energy devoted to the trading of financial instruments on financial markets. The volume of transactions taking place on the markets would therefore be a good candidate to measure it (Godechot, 2016b). Nevertheless, restricting financialisation to the trade of financial instruments would lead us to miss an important aspect. The depth of the subprime crisis shows that part of the traditional banking system, which includes mortgages (Fligstein and Goldstein, 2010), consumer credit or credit cards (Poon, 2009), has been deeply affected by new ideas stemming from financial markets, for example commodification, securitisation, liquidity, diversification, standardisation, fair value accounting, mathematical pricing models and delta-hedging techniques for arbitrage. Financialisation therefore cannot be limited to the growth of financial markets, but should instead be understood as the spread of the financial market's core logic beyond the bounds of its original sphere.

Second, the causes of financialisation are far from clear. Traditional explanations, in terms of demands for financial services or links between financial services and economic growth, struggle to account for long-term trends (Philippon and Resheff, 2013). Deregulation policies have played a

significant role in this movement (ibid.), specifically with respect to all the pro-market policies detailed in the section that follows. In the same line, the combination of advances in financial theory and new technologies equally contributed to perform new markets (cf. third section). However, it would also appear that once the initial favourable conditions are aligned, market finance also increases in accordance with endogenous mechanisms (into which more research is still needed), creating as such a phenomenon of path dependency.

Third, the consequences of financialisation have not yet been fully measured. Traditionally, the main issue in economics is finance's contribution to economic growth, financial and economic stability and global crises (Aglietta and Rébérioux, 2004; Artus et al., 2008). A growing section of the research also underlines finance's substantial impact on the increase of inequalities (Atkinson et al., 2011), due to the high-income salaries distributed at its core (Bell and Van Reenen, 2014; Godechot, 2012). It has also contributed substantially to spatial segregation and the increase in salary differences between global cities and hinterlands (Godechot, 2013), as well as to inequalities within non-financial firms (Goldstein, 2012; Lin and Tomaskovic-Devey, 2013), notably due to the promotion of new forms of management and new ways of conceptualising companies, based exclusively on their financial value. Finally, financialisation emerges by activating powerful mechanisms (both within and outside of its own field) that will be further detailed in the following pages of this chapter.

A depoliticising policy: the institution of markets

Market exchange has not always been thought of as a fundamentally apolitical act. As such, during the emergence of the London Stock Market, at the beginning of the eighteenth century, transactions for certain securities took place preferentially between members of the same party, either the *Whigs* or the *Tories* (Carruthers, 1996). In the context of consecutive political rivalry at the time of the Glorious Revolution, these two parties, whether by safeguarding it or conquering for it, indeed sought to maintain their control over the principal institutions lending money to the State and, in doing so, either establish or defend their own power over the State. The initial political dimension of financial exchange, especially visible in England during the eighteenth century, was nonetheless obscured by the effectively symbolic work of depoliticisation. De Goede (2005) provides a striking example of this process by revisiting the narrow and fragile threshold that financial markets established in the United States between gambling – unlawful and often forbidden – and financial speculation – which was considered lawful. Consequently, US stock market representatives succeeded in establishing, in the eyes of the authorities, a contrast between two very similar practices. The first being bets placed on prices that took place in certain cafés known as *bucket shops*, that were thought to exploit an irrational passion for gambling and destabilise the markets, and

the second being futures trading on the stock markets by speculators, who were presumed to conduct sound calculations and therefore stabilise prices through their actions. De Goede thus proposes the groundwork for a Foucauldian history of financial markets which, through re-politicising institutions that present themselves in a naturalised and depoliticised manner, thus demonstrates the very contingent, political and *in fine* amendable nature of financial markets.

Financial markets are hence paradoxically political. They deny their political character by highlighting the primacy of financial interest and the non-partisan nature of their equilibria (above all guided by the principles of economics). However, in parallel, the principle financial maxim – that prices represent the value of securities – is no less than a political affirmation that implies furthermore a specific social order (Ortiz, 2013, 2014a and 2014b). The paradoxically (a)political market order is not only the result of the endogenous dynamic of the financial sphere, it also owes its existence to policies related to the creation or the deepening of financial markets.

Montagne (2006) accordingly retraces the very specific legal conditions within the framework of which US pension funds, one of the pillars of contemporary financialisation, have been able to prosper. In actual fact, they depend upon a type of contract that is hardly representative of classical liberalism, known as a *trust*, which originates from the feudal world and that deems the beneficiary (the employee) a minor. The State's imperative to protect this individual as such leads less towards a freeing-up of the contract, than it does towards the surveying of *trustees*. In particular, the 1974 Employee Retirement Income Security Act (ERISA) urges pension funds to follow 'good financial practices' and forbids them to take into account any additional interests (such as retaining the recipients' employment) other than the financial interests of their employee recipients. This Act *in fine* moves less towards giving employees control over finance, than it does towards sealing off finance within itself.

Quite paradoxically, pro-market policy has not always been promoted solely by financial circles but also quite often by coalitions. Such coalitions were formed between social movements, finance groups and progressive governments – desiring to open up financing possibilities for those most in need or to improve market competition. Fligstein and Goldstein (2010) consequently illustrate how the development of *Mortgage Backed Securities* was initiated by the Johnson administration in the context of its *Great Society* project. The US government had discovered that this type of security, backed by major governmental mortgage agencies (Fanny Mae and Freddie Mac), could be an innovative solution for promoting access to property for those on the inferior fringes of the middle class, without fuelling the then-threatening inflation. As Krippner (2011) has shown, the dismantling of the *Glass-Steagall Act* – which since the 1930s separated investment banking from commercial banking – and more specifically, the dismantling of one of its emblematic

measures, the *Q Regulation* – which limited interest rates on loans and deposits – were also brought on by social movements led by progressive actors such as Ralph Nader. Across the Atlantic in France, the major market transformation was carried out during the 1980s by the socialist government who, following the failure of stimulus policies, opted to promote market socialism (Lagneau-Ymonet and Riva, 2012).

So, in spite of all this, are financial markets wholly embedded in institutions and institutional policies – including those that strive for dis-embeddedness (Gayon and Lemoine, 2014)? Fligstein initiated this particular research programme by illustrating that traditional company governance, notably distinguished by its promotion of the multi-divisional firm and managers who originate from finance departments, owes a lot to legislation changes in the 1950s that limited vertical and horizontal integration in the name of competition (Fligstein, 1990). Numerous studies have shown that the multi-divisional firm model, whose privileged objectives were diversification and expansion, ceded its place to an organisational model focused on creating shareholder value (Fligstein, 2001) and entirely centred on its core business activities, with the aim of maximising the company's stock market value. The firm was therefore split into as many profit centres as there were elementary units, with the value of each being measured in light of its potential resale on the market. A symptom of this transformation was the increasing power attributed to finance directors heading up companies and their appointment as chief financial officers (CFO), replacing chief operating officers (COO) (Zorn, 2004; Zorn et al., 2005). Clearly present at the outset of this movement is an institutional source, namely the transformation of the US tax system at the end of the 1970s (Zorn, 2004). The movement continued however thanks to the promotion of the shareholder value creation ideology, the 1980s hostile takeovers and the heightened role of financial analysts in determining prices (Zorn et al., 2005). It also owed much to a logic endogenous to the economic field of the 1980s, which reunited and opposed three types of actors against one another. First off, the firm CEOs wanting to defend their power and their remuneration. Next, the *corporate raiders* who through leveraged buyout transactions – enabled thanks to the development of *junk bonds* – took control of major companies (or threatened to do so) in order to brutally restructure them. And finally, institutional investors, notably pension funds, preoccupied with avoiding certain transactions that could affect them negatively, such as *greenmailing* – when firms buyback shares from raiders for prices higher than those on the market (Heilbron et al., 2014). The diffusion of the shareholder value ideology, which favours less the shareholder than it does those said to represent them (Jung and Dobbin, 2016; Goldstein, 2012), owes more to the 'field logic' than to a single actor, even if that actor happens to be the State itself (Heilbron et al., 2014).

Approaching finance, its origins and its development, via its institutional embeddedness avoids turning financialisation into a self-emerging

phenomenon that materialises out of thin air. Even though institutions do not provide an explanation for everything, they certainly play the role of founder and initiator. Moving beyond this initiator's role, policy from state institutions during the financial cycles of deregulation–crisis–reregulation (Abolafia, 1996), notably that of the central bank (Fligstein and Goldstein, 2010; Krippner, 2011), has also been found to be stunningly short-sighted and incapable in the US of predicting the formation of a bubble or of softening the blow after it has burst. This is also the case with policy from governments, who only succeed in putting into place effective, less costly and restrictive rescue plans once the banking industry has managed to collectively coordinate itself under the leadership of its key players urged on by their declining health (Woll, 2014).

A new regime of knowledge

The *Social Studies of Finance* not only examine how modern finance has taken root institutionally, they also consider the new regime of knowledge that finance encourages, which is characterised by a strong, but also transformative interaction between professional and academic knowledge. It is less a question of contesting such professional and academic knowledge, than it is of taking it up as subjects for study; and doing so consequently enables researchers to show how finance itself is structured and transformed by financial science.

The *Social Studies of Finance* (SSF) are therefore the principal grounds on which a research programme studying 'performativity'[3] has been established, first launched by Michel Callon in 1998. According to Callon, the at times ritual criticism of neo-classical economics found in economic sociology articles is both unproductive and inaccurate. On the contrary, the utopian idea of *homo œconomicus* has re-emerged as 'economics, in the broad sense of the term, performs, shapes and formats the economy, rather than observing how it functions' (Callon, 1998). This revival of John Austin's concept has flourished in the field of SSF, to the point where several authors have considered it a key theme. The research produced as a result of this movement has shown that scientific statements are no longer just observations but, much like the celebrant's words 'I now declare you husband and wife', they also have the ability to transform the reality about which they speak.

In line with this perspective, Muniesa (2000; 2007) established a genealogy related to a minor innovation, which occurred on the Paris Stock Market: the introduction of a *fixing* auction at market close.[4] This auction resulted from the

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[3]. Developed in a collection of works published in 1962 by the philosopher Austin (*How to do things with words*), the concept of 'performativity' describes the characteristic of language that is its influence over the reality it describes.

[4]. *Fixing* here refers to a discrete call auction wherein the auctioneer has taken time to gather together all the sales and purchasing orders before establishing the price. It sits in opposition to continuous trading, where as soon as an offering price equals the

crossing over of two quite distinct areas of activity. On one side, there were the market engineers, anxious about potential end-of-day manipulations with regard to establishing the closing price, a reference for many market agreements. On the other side, researchers from the academic world concerned with either financial theory or auction theory, who were comparing the quality of prices in various market structures. Organising a fixing auction for the market close, ten minutes after the end of continuous trading, appeared to be an elegant solution for establishing market equilibrium – *à la Walras*. It produced 'good quality' prices, founded on the accumulation of all sale and purchase offers made over a substantial period of time, and it was a very good response to the practical problem of price manipulation. It was enforced contrary to an alternative solution used on other stock markets, that of calculating an average of the prices 30 minutes before close, a solution considered by stock market experts to be more artificial and less revealing in terms of market forces. The field of economics therefore acted as a source of inspiration and, combined with market engineering, thus contributed towards performing the organisation of financial transactions.

MacKenzie (2006), examining the fate of the Black Scholes formula in the financial industry, analysed another even more distinct case of the performativity of economics. In 1973 Black and Scholes published a theoretical solution to a then canonical academic issue in financial economics, that of the value of an *option*, a type of contract offering the right – but imposing no obligation – to buy a particular share on a given date. By modelling share prices as a Log-normal random walk, the two economists showed that the price of an option is a function of several elements, which included its duration, the interest rate, the price and the volatility of the share in question. When the two theorists began testing the formula on past data, they found it incorrectly described the relations between prices. However, a short time after the formula was published, prices began to behave just like it had indicated.

The various stages of this example of 'performativity' have been explained in detail by MacKenzie. In the mid-1970s, the price listings were sold off by one of the formula's creators. These listings described the theoretical value of options in relation to the evolution of current market prices. They were subsequently used by *traders* on the market to locate expensive and cheap options, allowing them to engage in arbitrage by selling off the former and buying up the latter. This 'performing' of the market in line with the formula, insists MacKenzie, does not correspond to a situation whereby the market adopts the 'only genuine solution' to the problem of pricing. The formula relied on noteworthy approximations and simplifications, in particular the hypothesis of the Log-normality of prices, that is to say the very weak probability of extreme variations. The crash of 1987 during which the market fell by more than 20 per cent in a single day would have been improbable

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sales price, a transaction is concluded.

according to the modelling used above. Financial theory, which deals with the pricing of complex financial products and portfolio allocation, therefore overturns the rationale of scientific discovery. In essence, it transforms financial reality to a much greater extent than it uncovers the relations that structure it.

Such 'performing' is not limited to canonical theories of financial science. Certain seemingly insignificant technical mechanisms of representation can play a determining role in the action. Zuckerman (1999; 2004) as such underlines the impact of categories employed by actors. In his work, financial analysts are seen to perceive firm value through economic sectors. Categories are therefore all the more meaningful to analysts in that they constitute a framework for their professional specialisation. Multi-sector firms, incoherent from the perspective of categorical division, are therefore often monitored by analysts coming from vastly different specialisations. This incoherent network position generates fewer, less favourable and more contradictory valuations; consequently prompting the undervaluation of a company's securities on the stock market, in addition to triggering stronger volatility and higher transaction volumes when results are announced.

It is impossible though to reduce the scientific research programme analysing the regime of financial knowledge to the study of the performativity of academic financial theory. For one reason, it is not always performed with success (Jung and Dobbin, 2016). In certain cases, even counter-performativity could be mentioned (MacKenzie, 2006), particularly that of the anomalies revealed by behavioural finance. Even just the naming of anomalies (such as the 1st of January effect, which is the likelihood of a price rise occurring on this date) can lead to their disappearance (simply through the exploitation of opportunities for arbitrage). For another reason, the programme of performativity often forgets to include cultural, social and institutional reasons that can lead to different theories being adopted. The programme of performativity can therefore be expanded via a study of financial reasoning in all its diversity (Tadjeddine, 2000).

Smith (1999) is without doubt one of the first sociologists to propose a detailed analysis of financial beliefs and behaviours through the development of a gallery of flamboyant profiles that feature financial participants. He distinguishes six diverse categories of true believers who think the market is systematically governed by forces. First up are the 'Fundamentalists', who believe that economic forecasts, in particular those related to dividends, are what determine prices. Next, there are those partial to the theory of 'Insiders' who believe prices are determined by major players who have access to privileged information, which leads them to lie in wait for any related rumours. The Cyclist-Chartists make their predictions on the basis of 'resistance lines', straight lines they trace between the *extrema* (maxima and minima) of prices. Then there are the proponents of the Trader style, who follow their *feelings* trying to sense the market's movements, while Efficient Market Believers

consider that the only thing that matters is accurately replicating the global market in their portfolios. Finally, the 'Transformational Idea Adherents' seek out economic ideas likely to radically change the world, like for example the 'new economy'.

Less specific with regard to the spread of possible beliefs and their ways of functioning, within my own research (Godechot, 2001, 2016a) I have examined a variety of financial practices identified in trading rooms involved in the commercialisation and arbitrage of sophisticated derivatives, and have established connections between these and individual career paths in finance, the capital owned by actors and, lastly, the structure of the positions they occupy in the room. Social and educational background, in addition to the means of initiation into financial activities, which often occurs via a mentor, produce ways of seeing the market that are not only persistent, but that also represent a system of likes and dislikes – that never runs dry of tireless controversies – similar in a way to the debates commonly found amongst IT users: Mac or PC, Windows or Linux, etc. As it were, three financial strategies that are easily identified via a questionnaire – mathematical arbitrage, chartist analysis and economic analysis – stand opposed to one another in that they create opposition between individuals who either come from different educational backgrounds or who hold different positions in the trading room or who maintain different market perspectives. Followers of mathematical arbitrage here find an alternative way of continuing the preparatory school where they developed an enchanted relationship with academic knowledge. Like the followers of economic analysis, they often find chartists to be inept, and the two compete to provide explanations for its wholly unfounded use. They are however also quite often opposed to macro-economic analysis as, according to them, it lacks precision. Followers of this latter analysis in contrast highlight the limited character of arbitrage; i.e. the small wins, which deep down are not based on a global understanding of the market, but only on the very narrow relations between various securities from the same family. Finally, the followers of chartist analysis, often hailing from working class backgrounds, hold in high regard the counter-cultural side of this pagan-like knowledge. Although its methods generally lead to ambiguous recommendations, they believe charts enable them to outdo even those financial actors using the most legitimate forms of knowledge (Godechot, 2008a). This description of these three opposing camps jostling around within one space – connected by a continuum of hybrid positions much like a 'bazaar of rationality', where everyone brings what they have to offer and positions themselves in relation to what others are offering, seeking to both associate and differentiate themselves from one another – allows us to think differently about rationality; and not just as an *a priori* given for social actors, like economists' models make it out to be, but as a structural process for acquiring and constructing reasoning (Godechot, 2016a). The guiding principle of this bazaar of rationality is therefore, either consciously or unconsciously, 'economic', as it incites individuals to take up those techniques for which they

feel the most affinity, for which they possess the most capital and the necessary predisposition. Concerning the nature of the market, this debate between supporters of different methods in one way shows that the market is a reflexive institution. The market is neither fundamentalist, nor chartist, nor does it conform to mathematic efficiency. It is instead the product of this clash between differing points of view (Godechot, 2008a).

If knowledge is at this point constitutive of contemporary finance, we can therefore deduce that the financial crisis itself is also a matter of knowledge. As has been convincingly demonstrated by Donald MacKenzie (2011) in relation to the *subprime* crisis. The most toxic financial products, the MBS-CDOs – debt obligations backed by mortgage portfolios – were potentially born from two types of knowledge, one relative to mortgage securitisation (for the first stage of securitisation) and the other relative to corporate bonds securitisation (for the second stage of securitisation). Banks and ratings agencies, however, entrusted the valuation of mortgage products to services involved in the securitisation of corporate bonds, who in doing so transposed logical reasoning specific to the valuation of corporate bonds portfolios across to MBS-CDOs. However, in contrast with corporate portfolios, there are no price series for mortgage portfolios enabling the autocorrelation of defaults and anticipated repayments to be calculated. To make up for this lack of information, the banks and ratings agencies adopted an arbitrary level of correlation (a 'Gaussian Copula') of 0.3, which corresponded to the mean autocorrelation for defaults by firms within the same sector. The avalanche of defaults following the 2007 interest rate rise shows that this conceptual decision, the product of a conceptual and social division of labour in asset valuation activities, seriously underestimated the autocorrelation of defaults, leading as a result to the most serious financial crisis since the Great Depression.

The systematisation of 'greed'

The unilaterality of the challenges uniquely faced in finance – namely, providing profit for corporations and bonuses for employees – in addition to the degree of technicality involved in economic calculations and transaction arrangements, and the lively competition that rules over markets, all contribute towards developing the autonomous separation of this field from others, in addition to establishing highly rationalised practices. Numerous authors (Abolafia, 1996: 14–37; Godechot, 2001; Zaloom, 2006: 111–125) have examined this Weberian process of behaviour rationalisation and questioned whether the financial world was not in some way contributing to bringing the fictional being of *homo œconomicus* (Callon, 1998) into actual existence, thanks to work spaces equipped with computing systems, the continuous accounting of business activity and, most importantly, due to strong monetary incentives. Studying incentives is a good way of understanding rationalisation, because

their impact is without doubt more striking in this sphere than elsewhere. However, carrying out such a study means avoiding two pitfalls. The first involves considering rationalisation to be so powerful that it will ultimately culminate in the arrival, at the heart of the financial markets, of a perfect and accomplished *homo œconomicus*, wholly validating the scientific approaches (*mainstream* economics) founded exclusively on this hypothesis, even if done so for 'ill-founded reasons', eventually rendering any development of alternative approaches redundant. The second pitfall consists of believing that all incentives have been rationally calibrated in order to produce behaviours aligned in favour with the shareholder's interests.

Emphasising more or less this dimension, ethnographic studies show that compensations, in particular bonuses, constitute the gravitational centre of financial activity (Abolafia, 1996; Godechot, 2001 and 2016c; Ortiz, 2014a; Roth, 2006; Zaloom, 2006). High remuneration indeed greatly steers behaviours, though without achieving the equilibrium described by neoclassical economics. Indeed, on the whole the extremely elevated compensation levels present in finance illustrate that neither the financial securities market, nor the financial labour market are efficient. If salaries were to follow the predictions provided by principal-agent models, then they would consist of a much lower fixed salary, even a negative salary (< 0), so that the utility in these financial roles would be equivalent to that encountered in non-financial professions that require the same skills (Godechot, 2011 and 2016c). The fact that certain employees are able to acquire the power to *hold-up* a corporation constitutes a better explanation for the level of wages than the idea of optimal incentives to work hard (Godechot, 2016c). Studying an exemplary case concerning hold-ups allows us to stylise how salaries are actually determined. In 2000, two trading room managers working for a major bank obtained €10 and €7 million in bonuses by brandishing the credible threat to leave and take the teams they managed with them to a rival bank. This case illustrates the logic of the hold-up, namely that having control of transferable assets provides the means to threaten the company with damages if they refuse a renegotiation that favours the employee. This technique is even more frequent considering that protection against it is relatively inefficient. It leads us to observe the financial industry's labour market in a different way; as though it was less like a market representing people and individual skills, and more like a market of corporate assets collectively produced and carried off by people who organise their transfer (Godechot, 2014).

Studying compensation is also important for understanding financial behaviours. Following the crisis, the wider public and most economists emphasised the fact that remunerations could encourage risk-taking and help to explain the crisis (Cheng et al., 2015). To this well-known element, perhaps overestimated in the public debate, we can add another that remains underrated (Godechot, 2008b). *Bonuses* not only lead to excess risk-taking (with only the positive amount of the profit being rewarded, while negative amounts

carry no penalties), they also lead to the deformation of risk measurement or more precisely the politicisation of risk measurement in financial corporations. Indeed, as long as the equivalent of 100–200 per cent of the bulk of fixed salaries is distributed each year in the form of bonuses and as long as these bonuses depend on accounting measures based on the revenues net of the costs of risk, then the temptation to underestimate the risks incurred so as to maximise bonuses will remain great, and even more so when they involve new financial products that are difficult to value. Moreover, in major banks, risk management departments do not fully assume their supervisory role. To begin with, faced with this role, *front office* staffs enjoy great legitimacy and a powerful ability to impose certain risk measurements on other parties, to inherently favour their own position. Second, bonuses for risk management departments often depend at least indirectly on the percentage of the bonus pool duly granted to the *front office*. Finally, those in risk management often have their sights set on *trading* professions. They must therefore monitor people for whom they would very much like to work for in the future. This therefore means not being too overzealous, so as to avoid upsetting them.

This greed-based logic also fuels the two additional logics discussed above: the depoliticising institution of markets and the transformational overlapping of academic and professional knowledges. The article by Jung and Dobbin (2016) articulates how the partial performing of the neoclassical academic theory of firms, which promotes a depoliticised firm uniquely at the service of its shareholders, owes much to the remuneration conditions of portfolio managers handling pension funds. Paid in the form of bonuses, they promote the elements of this theory in line with this form of extremely short-term compensation, and abandon all others.

Conclusion: the advance of finance

This overview of social studies research centred on finance, which is undoubtedly incomplete, aims to illustrate the *advance* of finance, in the dual sense of the term. On one hand, illustrating the progress finance has made and, on the other, the lead it has taken ahead of other economic sectors and more generally the rest of society. A comprehensive evaluation of the social effects of this advance has, as yet, only just begun. While mainstream economics generally tends to underline any shared benefits, other social sciences, which are more critical, often focus exclusively on the costs. Although finance subjects (certain) people to new constraints, it also liberates (others) from traditional dependencies (Fontaine, 2014). As a final example of this, the development of *credit scoring* in the US clearly demonstrates how transforming the way credit equivalences are established can alter the types of actors who are either favoured or disfavoured. The credit score system indeed replaces a method of credit distribution founded on affiliations with specific categories

(i.e. gender, race, age) and local social reputations, with one instead founded on one's personal debt and repayment history (Fourcade and Healy, 2013; Poon, 2009). Furthermore, the academic debate *a propos* the costs and benefits of the *advance* of finance is but a subset of the political and social debate surrounding this same issue. Policy choices reflect a reorientation in relation to this subject. After three decades of policies stimulating the advance of finance, now, following the 2008 financial crisis, societies instead seek to contain it without, for the moment, having found the necessary solutions.

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