Annals of the Fondazione Luigi Einaudi
Volume LVI, December 2022: 147-162

GOOD THEORIES AND BAD PRACTICES. SPECULATION AND THE ECONOMISTS OF THE 19TH CENTURY

Annalisa Rosselli*

ABSTRACT

Speculation in commodity and financial markets drew the attention of economists in the mid-19th century, when interconnected organized markets emerged, due in part to technical innovations. It is then that speculation became a profession, with specialized economic agents practicing it, meeting with hostility from the law and the general public. The paper reconstructs the arguments by which economists before World War I tried to show that speculation, hitherto condemned on a moral level and considered economically harmful, was instead useful to the smooth functioning of the economy. Their arguments rested on the belief that there exists a long-run fundamental price that reflects the 'natural' order of things. Toward this price market prices converge since they cannot depart from it except temporarily. However, faith in the market's ability to bring out prices reflecting the fundamental values of commodities and financial assets was not without limits and contrary to what happened in the later period, many doubts remained with respect to some of the more speculative financial instruments.

Keywords: Speculation, History of Financial Markets, Henry C. Emery.
JEL Codes: B10, N20.

There are many reasons to reflect on the origins of speculation in financial and commodity markets.[1] In this early 21st century, we have seen our economies disrupted by sensational bankruptcies and sometimes equally sensational bailouts of large financial institutions that had embarked on

---

* Università di Roma Tor Vergata and Accademia dei Lincei. Address for correspondence: annalisa.rosselli@uniroma2.it.

1 The Italian version of this text was presented as Fellows' Lecture at the Luigi Einaudi Foundation-Turin on November 24, 2021. I thank for their interest and comments the participants and especially my discussants Marco Dardi and Giovanni Farese.

ISSN: 2532-4969
doi: 10.26331/1185

highly dubious speculative investments. We have experienced the sub-prime and toxic securities crisis. We have lived through the attacks on sovereign debts and have watched the financial markets dictate the rules of economic policy and even cause governments to change. Even before the start of the war in Ukraine, oil prices experienced profound swings such as have not been seen since the 1970s. Meanwhile, new technologies have introduced new players and new products: they opened stock markets to a wide audience, creating platforms that would allow millions of users to invest even small sums online at zero fees; they changed the dynamics of markets through news dissemination and the coordination of small savers' trading through social networks; and they invented new transaction objects. Cryptocurrencies, the first type of international currency in history that is neither backed by the authority of a state nor by the value of a commodity, now have frightening fluctuating quotes that regularly appear in newsletters sent to ordinary savers. Not to mention the latest creation, non-fungible tokens, which use blockchain technology to represent something as unique as an image and have already reached million-dollar quotations.

What are we to make of this? Are we witnessing an outpouring of speculative activity that is a symptom of a structural change in the economy, headed toward a rentier capitalism subservient to finance and that generates inequality and stagnation? Or is it simply a quantitative expansion of wealth allocation opportunities and the normal adaptation to technological innovation of phenomena that capitalism faced for centuries with some crises but without too much damage? These I think are fundamental questions that should be at the center of our concerns. In order to provide a small contribution to the general reflection as an economic historian and historian of economics, in the belief that even from the past we can draw interpretive categories for the present, I have tried to reconstruct the path that led to the present situation starting from its beginnings. Hence, I have wondered what role economists have played in making legitimate and socially acceptable, protected by law, activities that to many seem merely the unrestrained unleashing of greed in a zero-sum game that makes someone rich without offering any counterpart to the community. For the sake of clarity, by speculation I mean what is defined in the Collins Dictionary, "engagement in business transactions involving considerable risk but offering the chance of large gains, esp. trading in commodities, stocks, etc., in the hope of profit from changes in the market price". Thus, speculation is distinguished from other business activities by its purposes, which are totally unrelated to the use of the object of the transaction either for consumption or production or intermediation or as a source of income. It is a *sui generis* activity toward which economists have long shown signs of unease. Even as late as 1899 at the twelfth annual meeting of the American Economic

Association, participants could not reach a definitive conclusion on how to classify the speculator's income, attributing it to a specific factor of production, and thus justifying its gains within the prevailing theory of distribution, since the speculator was neither a producer nor a merchant providing intermediation services, let alone a worker. Yet among the participants at the meeting there was Henry Crosby Emery, who, with his 1896 *Speculation on the Stock and Produce Exchanges of the United States* (1896) based on his doctoral dissertation at Columbia University, had established himself as the leading authority in the Anglo-Saxon world on the subject of speculation and its positive function for the working of the market economy.[2]

There is still no history of the economic theories of speculation. The classics of the history of economic thought – Schumpeter or Blaug, for example – hardly mention speculation. More recent texts cannot be silent about it, at least when they reconstruct the thought of Keynes and post-Keynesians like Minsky, but they refer almost exclusively to the 20th century. There is no reconstruction of economic thought on speculation in its early days, when, in the mid-19th century, there was a shift in the public conception of speculation from being equated with gambling to being regarded as a respectable activity useful to the smooth functioning of the economy.

Drawing on the results of research work I have often conducted together with Paolo Paesani,[3] I argue that a reconstruction of the origins of economic theories of speculation is interesting for two reasons.

First, because it highlights the complex role of economists who found themselves, then and now, fighting on two fronts. On the one hand, economists have developed a positive theory of speculation, highlighting its constructive aspects against popular mistrust often based on misinformation and prejudice. On the other hand, their theories have clashed with the reality of often unintelligible and turbulent markets. In other words, they presented speculation as a useful activity that leads to a quick and correct assessment of the value of traded objects (no matter whether they were financial assets or commodities) by helping to stabilize their prices around their respective 'fundamental values'. However, their theories clashed with the frequent phenomena of out-of-control prices, phenomena that only in some cases could be attributed to fraudulent behaviour such as spreading fake news or rigged financial statements, i.e., violations of the rules of the

---

[2] See "Prof. Henry C. Emery, in what is without doubt the most thorough work on speculation written in English" (Ryan 1902: 337); "This book [Emery 1896] has two conspicuous merits. It is thorough and it is fair" (Steele 1897: 588).

[3] Rosselli (2017); Paesani and Rosselli (2020; 2021; 2022).

game. Much more often, those out-of-control prices were a consequence of the rules of the game themselves and of destabilizing speculation.

Interestingly, in the first decades of reflection on speculation in the latter part of the 19th century, an optimistic attitude prevailed among economists who largely attempted the path of reformism, trying to identify rules to maintain stabilizing ("healthy" in Alfred Marshall's terminology) speculation while preventing destabilizing (or "malign") speculation (Dardi and Gallegati 1992). In few cases as in this one, however, has reformism encountered so many difficulties in trying to find – and even more to impose – rules on the total freedom of markets. This has perhaps led to the current dichotomy, between a mainstream view, which maintains substantial faith in the constructive role of speculation in leading to efficient resource allocation, net of 'accidents' (e.g., bubbles), and the view of heterodox economists. These, aware of the differences in power and information among economic agents and doubtful that 'fundamentals' (i.e., the objective basis of value) guide the decisions of traders, regard destabilizing speculation as the inescapable product of the normal functioning of markets and do not trace it to exceptional episodes. For example, a book published a few years ago by Massimo Amato and Luca Fantacci – *Saving the Market from Capitalism: Ideas for an Alternative Finance* (2014) argues that it is necessary to reconnect the finance to the real economy. The authors maintain that there is one market too many in the market economy: the financial one, where the possibility of making any asset liquid leads to the deresponsibilization of economic agents who do not pay attention to what they buy to the extent that they can hope to pass the wrong card to someone else. Hence, the unpredictable and destabilizing price movements.

The second reason why the reconstruction of the early defence of speculation is interesting is because we can see the arguments developed here as a relevant and successful exercise of persuasion of the public and policy-makers by economists, which inaugurated an honoured tradition that reaches to the present day. When speculation fostered the spread of new instruments (from futures contracts and options in the mid-19th century to the CDOs[4] of today), which could appear more like a new kind of wager than an investment activity, economists developed theories that on the one hand downplayed their novelty and on the other presented their usefulness as a tool that transferred risk to agents who could better carry it.

I mentioned a change in attitude toward speculation going back to the mid-19th century because that is when speculative activity began to be exercised on a large scale. Not that there hadn't been clearly speculative

[4] CDO = Collateralized Debt Obligation.

episodes before then. We are all familiar with the tulip bubble of 1634-1635 (which, however, took place outside organized markets) or the South Sea bubble or John Law and his Mississippi Company, episodes that, however, on the whole, provoked more moral than economic reflections. Even David Ricardo, who had spent his entire life in the London Stock Exchange, did not feel the need to talk about speculation in his *Principles*, although one of his statements – "My life has been one of success, but of anxiety" – betrays that it was an activity that was certainly not foreign to him.[5]

It was the reality that forced reflection on speculation, when around the 1860s technological advances in maritime and land transportation and communications (e.g., steam-powered shipping allowing for certain travel times, intercontinental telegraph lines) contributed to the emergence of a network of interconnected global markets for many commodities such as wheat and cotton. At the same time, the need to raise capital beyond the resources of individual investors for the new ventures that fuelled the industrialization of the West (construction of railroads and canals, supply of water, gas and electricity) led to an extraordinary development of the major Western stock exchanges. They acquired an international character and broadened the range of securities traded, until then comprising almost exclusively of government debt securities and those of a few Merchant Companies. Here, too, technological progress played its part in expanding the markets, introducing around the 1870s the use of the ticker-tape, which transmitted quotations even to those outside the Stock Exchange premises.

In quantitative terms, the change was impressive. In the London Stock Exchange, which throughout the second half of the 19th century was the most internationalized and important stock exchange in the world, the value of listed securities grew sixfold from 1850 to 1903, and just about as much the number of its members (Michie 1986: 174). Similar changes occurred for commodities. In 1859 the state of Illinois entrusted the power to regulate the market for agricultural commodities to the Chicago Board of Trade, which would maintain a dominant role to this day, but between 1875 and 1905 similar exchanges appeared in the United States, Canada,

---

[5] See Ricardo, vol. VII: 230. Ricardo however rather coldly turned away in 1817 from Jean Baptiste Say's proposal to involve him in the purchase and storage of a large quantity of potato flour worth 50,000 francs. Say expected its price to rise because French bakers would demand it to mix with the even more expensive wheat flour (but bread is *très beau et très bon*, Say hastened to add). We do not know whether the deterrent for Ricardo was the small scale of the operation compared to the levels to which he, an underwriter of English public debt issues worth millions of pounds, was accustomed. Or rather the disreputable character of the operation, which consisted of hoarding a commodity that was essential to the subsistence of the population.

Europe, and Latin America, dedicated to the exchange of everything from lard to oil.

In qualitative terms, the change was not smaller. Chiefly, among them was the transformation of speculation from a sporadic activity of merchants and producers to a profession regularly practiced by dealers operating with their own capital or on behalf of others. As stated by the aforementioned Emery, "instead of all traders speculating a little, a special class speculates much" (Emery 1896: 108-109).

Political and legislative institutions were not initially ready to accept this change. Speculative activity was condemned on a moral level and equated with gambling, which was prohibited almost everywhere. Only transactions that ended immediately, such as payments against instant transfer of ownership of goods or securities, were permitted. By contrast, contracts of a speculative nature, such as futures that set the price of a commodity today but provide for its delivery at a future date, were not officially allowed. Speculative contracts, though widely spread and tolerated, thus did not enjoy the protection of the law to enforce them, as is the case with winnings at the gambling table. But as time went on two strands of literature emerged to convince the public and governments of the usefulness of speculative activity and the need to turn it into a legitimate business. The first was the popular-manualistic strand, of financial education we would say today, which sought to explain the workings of the markets and its instruments to the general public by showing that what might appear to be a game based on luck was instead a respectable activity that required competence and rationality. The other, much more influential in the long run, was the scientific strand that appraised speculation for its effects on the functioning of the economic system. Editorial production of both strands was plentiful: in 1910 in the English language alone there were 125 general treatises on the subject and an infinity of other publications (Huebner 1910). This literature had as its subject speculation and its instruments both in commodity markets, such as the Chicago wheat market or the Liverpool cotton market to name the most important among many, and in stock exchanges such as the London Stock Exchange or the Paris Bourse. There were obvious differences between the commodities market and the financial securities market in terms of purposes and types of operators, but they were similar from the point of view of the opportunities they offered for speculators. It was for this reason that economists' analysis brought them together. In both markets, speculation is based on the fact that most transactions take place at a price set today but are completed at a future date. The difference between the stipulated price and the price that will prevail at the future date, which is obviously unknown at the time of the contract, determines the success or failure of the operation. This will rarely end with

the actual delivery of the commodity or security (speculation is not aimed at achieving ownership of something) but with another reverse transaction (the buyer sells what has been bought and vice versa) that serves to cash in or pay the price difference that has occurred in the meanwhile.

It was not easy to get the public to accept these practices. Especially in the commodities market it was soon evident that quantities of commodities were traded far in excess of total existing production. In 1888, for example, one calculation estimated that U.S. farmers had actually harvested 415 million bushels of wheat compared with about 25,000 trillion bushels of wheat traded through futures contracts (Levy 2006: 313). These transactions appeared as "fictitious" in the eyes of those actually engaged in production who deemed them responsible for adverse price fluctuations. Consequently, they provoked political reactions and legislative initiatives to ban them.

In this context, economists intervened in favour of speculation, starting precisely with the commodities market, arguing that professional speculators are just traders who are more informed about global market conditions and therefore able to identify, better and sooner than others, what should be the price that brings supply and demand together. Their activity hastens convergence toward the price that reflects fundamentals. Ideally, this defence of speculation paralleled the reversal of perspective that economic science, in its inception, had introduced against tradition and common sense, in the famous French controversy about free trade in grain in the 1760s. It had argued then that the best guarantee of having grain everywhere in sufficient quantity was not to hoard it by restricting its transportation from one location to another, but to allow freedom of trade. In this way merchants, informed of price differences, would be induced to transport grain from where the harvest had been plentiful and at a low price to where grain was scarce and at a high price. Similarly, in the last decades of the 19th century it was argued that speculators, armed with their superior knowledge and judgment, transported goods over time, buying in anticipation of future price increase when they knew the price had fallen too low and thus preventing it from falling further, or selling in the opposite case. Nothing new then, and what had worked in space could work in time. (The metaphor of speculation as transportation recurs very often in the writings of the period). Therefore, economists argued that one should not confuse cause and effect: speculation exists because prices are variable for objective reasons, since there would be no gain at constant prices, and not prices are variable because speculation exists. On the contrary, speculation leads to the stability of prices, so that, to use Emery's words again, their variations instead of resembling the billows of a stormy ocean are like the endless ripples of the sea surface in fair weather (Emery 1896: 121).

In this light, the speculative operation that aroused the most criticism and suspicion, short-selling, was also evaluated positively. It was attributed to depressing prices by throwing into the market quantities of commodities that did not exist yet or at any rate were not in the possession of those who sold them. However, if it is accepted that speculators have a better knowledge of the market, short-selling becomes a useful tool in their hands in the event of a bubble of rising prices, since it hastens convergence toward equilibrium by increasing the volume of sales. The aforementioned Marshall and Emery defended this position by bringing up as an example the exorbitant prices reached by land in the expanding cities of the New World precisely because of the lack of tools available to speculators with bearish expectations who could have curbed its continued rise.[6]

To this defence, based on speculators' supposedly greater ability to predict the future, another was added. The speculator is not only a prophet, to use the terminology Keynes would later employ in a famous article in 1923 (Keynes 1923), but he is also an insurer who allows hedging operations, that is, insurance against price changes not welcome by commodity producers and buyers. In the case of commodities in particular, price variability is an actual risk brought about by out-of-control events such as weather conditions affecting agricultural crops. Against this risk, both those who produce commodities and fear low prices and those who buy them as inputs for production and fear high prices, want to protect themselves. The speculator, by offering contracts for future delivery at a definite price, frees both from this uncertainty. Obviously, the price stipulated will be such that the speculator will be compensated for the risk he assumes by taking on the possibility of being wrong in his prediction of the future price. But the speculator, armed with better information and higher capital, has broader shoulders to bear the possibility of the error that would crush the farmer or the manufacturer. Transferring risk either by parcelling it out or by shifting it onto stronger parties will become a dogma, often illusory, of financial markets.

It seems clear that the theories of speculation that prevailed from the second half of the 19th century onward with their essentially optimistic view of commodity – and by extension of financial markets – drew their lifeblood from the belief that there exists a long-run fundamental price that reflects the 'natural' order of things. Toward this price market prices converge since they cannot depart from it except temporarily. In contrast, the pessimistic view of the effects of widespread speculation, which

---

[6] Marshall expressed this view in his comments on Emery's book and published it later in his *Industry and Trade* (Marshall 1919: 265, fn. 1).

persists in the 19th century alongside the optimistic one, can be seen as a legacy of a pre-classical tradition, which regarded prices as the result of a market bargaining process in which buyers and sellers confronted each other, bringing all their skills and powers of persuasion into play. Actual prices depended on the path that the bargaining process had followed (Grenier 2011).

There is a tendency of contrasting the regulated markets of the *Ancien Régime* that the Physiocrats and Turgot fought against with the freedom of trade advocated by Classical Political Economy. However, as a recent essay has cleverly pointed out (Harcourt 2011) in reality there are no fewer rules in today's business at the Chicago Board of Trade than there were in the 18th-century Paris grain market, subjected to police controls that encompassed all its social, health and economic aspects. The real difference is not in the number of rules, but in their purpose. Schematizing, it has been observed that the pre-classical tradition focused on equity, the classical (and later neo-classical) on efficiency (De Marchi and Morgan 1994). In preclassical markets there was agreement that the legitimate profit-seeking of 'good' speculation could not be dissociated from malicious speculation, which was a natural phenomenon, not an exception. In the grain market of the *Ancien Régime*, therefore, a plethora of rules aimed to prevent the formation of positions of control and to create symmetry of power and information: certification of weights and qualities by public officials, dissemination of information, prohibitions on resale within a given time from purchase, exclusion of certain categories of people, prohibitions on transactions outside the market, access reserved for consumers and artisans before merchants, and so on. When the power of the sellers in the market was equal to that of the buyers, their higgling resulted in a price that was 'fair' both in the sense that it ensured the reproducibility of the system – the remuneration of all factors of production was perceived as adequate – and to the extent that the outcome was socially acceptable. In this context, the main concern of the lawmaker was to put all market participants, who started from very different conditions of need and means, on an equal footing, in the belief that each would try to get the better of the other if given the chance.

Classical Political Economy, which shaped 19th-century economic thought, has instead promoted reliance on 'natural' prices, expressions of a natural order, reflecting intrinsic fundamental values. The natural prices of classical political economy do not depend on the process that leads to their formation, which economic theory can safely ignore. Market competition does not create prices but discovers them, and discovery is all the easier and faster the broader and freer the market participation. Free trade itself, which allows factors of production to move from one sector to a more pro-

fitable one, is part of a natural order. The concern of the lawmaker must therefore be to remove obstacles from its action, and not, driven by considerations of justice, to place limits on its operation. When the 'natural' prices of classical political economy were replaced by the 'equilibrium' prices of the marginalist approach, the same conclusions emerged even more forcefully. Prices were defined by the forces of supply and demand, and their efficiency was guaranteed by the rationality of the economic agents behind them. Economic theory assumed that these forces would always prevail, or the very concept of equilibrium would become meaningless. Any element that disturbed this process, including the manipulations of speculators, could not fundamentally alter the price mechanism.

This belief in the unstoppable prevalence of the 'true' price, however, encountered greater difficulties when one moved from the price of commodities, which could be thought of as determined by objectively assessable conditions of supply and demand, to the 'true' price of a security traded on the Stock Exchange, which depends essentially on expected future returns. The speculator's task as prophet and insurer became more difficult here, especially in a situation of prevailing information asymmetries, given the very rudimentary controls then required to launch new issues. Nevertheless, faith in the general laws of the market retained its strength. For example, at the end of his analysis of the influence on stock market prices of coalitions of traders, Robert Giffen commented:

> In general, we conclude that the importance often attached to these syndicates is greatly exaggerated. At certain times, when securities all tend to rise, the syndicates and speculators have some power to concentrate the force of the upward current on one or two groups of old or newly-created securities. At other times, when securities all tend to fall, they have a certain power of inducing sales of special securities and so precipitating their collapse. But their power is exercised at great risks to themselves, does not upset any *general laws*, and does not interfere with the general levels of price (Giffen 1877: 59-60; emphasis added).

Adding to the claim that speculation even in the Stock Exchange leads to the prevalence of the correct price was the intuitive argument that if the number of investors is very large, the valuation errors of individuals cancel each other out, thus giving rise to the idea that the individual can make mistakes but not the market, which will find its full affirmation in the present theory of efficient markets. What was an intuition of some found its scientific expression in the studies of Louis Bachelier, with his doctoral thesis published in 1900, on the normal distribution of errors. Once again, the theory defied reality, ignoring the fact that traders' errors were and are not only accidental, and therefore randomly distributed, but also systematic. Not to mention the notorious herd behaviour whereby traders' evalua-

tions are not independent of each other, but are influenced by observation of what others do.[7]

There was broad agreement among economists that a large number of investors is beneficial to market liquidity and efficiency. However, there were widely differing views on whether this group of investors should include small savers. It was clear to all that the democratization of the stock market opens the door to uninformed and unwise amateurs who, in addition to ruining themselves, muddy the waters and bring more costs than benefits. Faced with this possibility, reactions are diverse and depend on institutional context, national traditions, moral and political assessments, and, of course, views on how the stock market actually works. To quote the most famous economists, Walras represents the extreme position of those who wanted to close the Paris Stock Exchange by law to non-professionals

> to play on the stock exchange against the *Crédit Mobilier* and the bankers who make the best and the worst of it is to play a game you do not know against opponents who know your cards (Walras [1880] 1898: 436, translation mine).

The Victorian Marshall relied instead on the self-regulation of the London Stock Exchange, where the high commissions of its dealers and brokers kept amateur speculators away. It was not their fate, however, that worried him as much as the fact that professionals could devote themselves to seeking ways to make money at the expense of less capable and informed speculators by engaging in predicting their reactions and studying market psychology rather than immersing themselves in the more serious and useful task of correctly estimating the value of financial assets. On the other side of the Atlantic, Emery more cynically observed that it was precisely the possibility of easy gains at the expense of fools that enabled astute speculators to continue to successfully engage in their useful profession, as if easy play with the inexperienced provided them with the resources for the more difficult game among professionals,

> the speculation of the big operators depends upon the speculation of the public. Those hopes for reform are *chimerical* which look to a system in which only large speculators, of wide experience and knowledge, shall carefully investigate all price-determining factors, and fight out the battle of prices among themselves, while the public refrains from speculation altogether. Such a condition of things is highly desirable, but the big speculators are not prepared to maintain a market of this nature. If it be said that the price-making benefits of speculation come, not from the number of outsiders, but from the activity of those

[7] On the criticism of Bachelier by one of his examiners, Poincaré, see Heinz Kurz's reconstruction in Kurz (2013: 183).

best qualified for speculation, it may be answered that the activity of this latter class depends upon the participation of the former (Emery 1896: 190-191, emphasis added).

However, at this early stage of thinking about speculation, even the most cynical positions were not pushed to the extreme and the elements and practices that made financial instruments used for speculative purposes more acceptable were emphasized. The obligation to actually deliver the security or commodity implied in every futures contract, even if rarely exercised, justified their use and led to their legalization, which occurred, in the following decades, one after another in the major Western countries (Levy 2006). Contracts that instead allowed one of the parties to unilaterally avoid the obligation to deliver, or that provided for no delivery at all, were bound to raise doubts. This was the case with options – or rather "privileges" as they were called at the time-which remained in much longer legal limbo in all their forms: the right to buy or sell at a future date at a given price, and many variations on the theme that followed different usages and articulations. Many manuals (e.g. Castelli 1877, Higgins 1896) described them in detail as evidence of the prominent role they already played in organized markets, but those who engaged in their trade not only did not enjoy the protection of the law but also that of the internal rules of the exchanges. The Chicago Board of Trade, like other exchanges, could not enforce compliance with a contract based on a "privilege". Options were therefore prohibited by law, banned from the premises of exchanges and traded after hours. The reason for this hostility was their association with fraudulent practices, although their usefulness as a hedging tool was recognized by some (Emery 1896: 145). Options in fact exposed those who sold them to potentially unlimited risk if prices did not meet their expectations. Option sellers, whose numbers were small given the amount of funds required by this activity, therefore, in order to reduce the risk that the option would be exercised, entered the options market offering quotes far from the most likely price with destabilizing consequences. Or, even worse, when they began to fear that the markets would not move in the desired direction, they did not hesitate to resort to manipulative practices to achieve the desired result. Option buyers, on the other hand, could make large gains with very little capital if their predictions came true or, if not, at worst they would lose only the small option price. Observers viewed these conditions as conducive to risky behavior very close to gambling. Emery, after assessing the few benefits that options could bring to the business community, concluded that options were used by "the least desirable element in the market and largely for 'gambling' purposes" (Emery 1986: 185-186).

Marshall adds:

> There are a few cases in which dealings in options are part of legitimate trade. But there appears to be more force in the arguments for prohibiting them by law, than for prohibiting a simple buying or selling of futures; for they are relatively more serviceable to the gambler and the manipulator than to the straight forward dealer (Marshall 1919, 257, fn. 1).

Combining these arguments with the general distrust of organized speculation among large sections of the public on whom the opinion of economists had not yet taken hold, as discussed above, explains the hostile attitude of legislators toward options. At the end of the 19th century, all U.S. exchanges and commodity exchanges still banned options trading, although some trading took place elsewhere (Poitras 2009: 34).

Reflection on speculation thus enters the 20th century supported by an economic theory that fundamentally sees no substantial difference between stock markets and other markets and that will soon add empirical studies of price movements to its armamentarium, in the path inaugurated by Bachelier. The questions, however, had all already been identified: how much should legislators intervene and how much should we rely on the self-regulatory capacities of operators? what limits should be placed on access to markets by protecting small savers but also denying them the opportunity to use the means of enrichment available to big capital? or, even more generally, are financial markets fulfilling their task, which should be to direct capital to the most efficient and productive uses? Or are we still entrusting the development of capital to that by-product of the activities of a casino that Keynes lamented much later? the questions were already all there. More than a century later, however, we have not made much progress in finding the answers.

References

Amato M. and Fantacci L. 2014, *Saving the Market from Capitalism: Ideas for an Alternative Finance*, Cambridge, Oxford, Boston and New York: Polity Press.

Castelli C. 1877, *The Theory of Options in Stocks and Shares*, London: F.C. Mathieson.

Dardi M. and Gallegati M. 1992, "Alfred Marshall on Speculation", *History of Political Economy*, 24 (3): 571-594. Available at: https://doi.org/10.1215/00182702-24-3-5711817117 (accessed May 30, 2023).

De Marchi N. and Morgan M.S. 1994, "Introduction", in N. De Marchi and M.S. Morgan (eds.), *Higgling. Transactors and Their Market in the History of Economics*, Annual supplement to volume 26 of *History of Political Economy*, Durham and London: Duke University Press: 1-24.

Emery H.C. 1896, *Speculation on the Stock and Produce Exchanges of the United States*, New York: Columbia University Press.

Giffen, R. 1877, *Stock Exchange Securities*, London: G. Bell and Sons.

Grenier, J.-Y. 2011, "Valeur fondamentale et spéculation dans l'économie politique et le droit (fin XVIIe-XIXe siècle)", in N. Levratto and A. Stanziani (eds.), *Le capitalisme au futur antérieur. Crédit et spéculation en France, fin XVIIIe-début XXe siècles*, Bruxelles: Bruylant: 19-67.

Harcourt B.E. 2011, *The Illusion of Free Markets. Punishment and the Myth of Natural Order*, Cambridge, MA: Harvard University Press.

Higgins L.R. 1896, *The Put-and-Call*, London: E. Wilson.

Huebner S.S. 1910, "Bibliography on Securities and Stock Exchanges", *Annals of the American Academy of Political and Social Science*, 35 (3): 217-232. Available at: https://www.jstor.org/stable/10111891817117 (accessed May 30, 2023).

Keynes J.M. 1923, "Some Aspects of Commodity Markets", *The Manchester Guardian Commercial, Reconstruction Series*, in Id., *The Collected Writings of John Maynard Keynes* (CWK), Section 13, 29 March [1923a], London: Macmillan: 255-266.

Kurz H. 2013, *Economic Thought. A Brief History*, New York: Columbia University Press.

Levy J.I. 2006, "Contemplating Delivery: Futures Trading and the Problem of Commodity Exchange in the United States, 1875-1905", *American Historical Review*, 11 (2): 307-335. Available at: https://doi.org/10.1086/ahr.111.2.307 (accessed May 30, 2023).

Marshall A. 1919, *Industry and Trade*, London: Macmillan.

Michie R.C. 2007, *The Global Security Market. A History*, Oxford: Oxford University Press.

Michie R.C. 1986, "The London and New York Stock Exchanges, 1850-1914", *Journal of Economic History*, 46: 181-187.

Paesani P. and Rosselli A. 2022, "Early Reflections on the Democratization of Organised Markets and Their Regulations", in A. Arnon, M.C. Marcuzzo and A. Rosselli, *Financial Markets in Perspective – Lessons from Economic History and History of Economic Thought*, Cham: Springer: 43-59.

Paesani P. and Rosselli A. 2021, "How Speculation Became Respectable: Early Theories on Financial and Commodity Markets", *European Journal of the History of Economic Thought*, 28: 273-291. Available at: https://doi.org/10.1080/09672567.2020.1817117 (accessed May 30, 2023).

Paesani P. and Rosselli A. 2020, "Destabilizing Speculation on Organized Markets: Early Perspectives in the Spirit of Marshall", in K. Caldari, M. Dardi and S. Medema (eds.), *Marshall and the Marshallian Heritage. Essays in Honour of Tiziano Raffaelli*, Basingstoke: Palgrave Macmillan. Available at: https://drive.google.com/file/d/1Os9aYOmOVtV1UyeGdUu5CcFZyllvoQO2/view (accessed May 30, 2023).

Poitras G. 2009, "From Antwerp to Chicago: The History of Exchange Traded Derivative Security Contracts", *Revue d'Histoire des Sciences Humaines*, 20 (1): 11-50. Available at: https://www.cairn.info/revue-histoire-des-sciences-humaines-2009-1-page-11.htm (accessed May 30, 2023).

Ricardo D. (1951-1973) *The Works and Correspondence of David Ricardo*, edited by Piero Sraffa, with the collaboration of M.H. Dobb, Cambridge: Cambridge University Press.

Rosselli A. 2017, "Richard Kahn and the Stabilization of Commodity Prices", *Journal of the History of Economic Thought*, 39 (4): 483-501. Available at: https://doi.org/10.1017/S1053837217000499 (accessed May 30, 2023).