



Destabilizing Speculation on Organized Markets: Early Perspectives in the Spirit of Marshall

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1 INTRODUCTION

The reconstruction of Marshall's evolutionary approach to economics stands out among the many contributions made by Tiziano Raffaelli to the history of economic thought (Raffaelli 2003). From Marshall's early psychological writings to his unfinished book on progress, two features characterize this approach. First, the focus on the time dimension of economic decisions and their immediate and ultimate effects. Second, the idea that those decisions, and the equilibrium they lead to, reflect complex interactions between different groups of agents operating within an evolving economic and social environment (Caldari 2015). Both these features appear in Marshall's analysis of organized speculative markets, which forms the main subject of the present chapter.

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Marshall's ideas about speculation were mainly set out in three writings, two published during Marshall's lifetime in *Industry and Trade* (Marshall 1919: 250–268) and in *Money, Credit and Commerce* (Marshall 1923: 89–97); the other, a manuscript dated 1898, when Marshall was working on the second volume of the *Principles*,¹ was published posthumously by Dardi and Gallegati in 1992. Scattered observations in the *Principles* and Marshall's reading notes on H.C. Emery's book *Speculation in the Stock and Produce Exchanges of the United States* (Emery 1896) provide additional relevant reference.²

Commenting on the manuscript, Dardi and Gallegati (1992: 572) note a “shift of position from a typically nineteenth-century vision of speculation as a picturesque and sometimes objectionable, but essentially marginal phenomenon, to a modern view which places speculation at the very centre of the capitalist engine”. This occurred in connection with the consolidation of organized markets for commodities and stocks at the turn of the twentieth century. That this phenomenon should attract Marshall's interest is hardly surprising, given his well-known attention to the actual working of the economy and its transformations.

As argued in detail below, three elements characterize Marshall's mature views on speculation. First, organized speculation is a form of intertemporal arbitrage, which stabilizes prices and improves allocation by conveying resources where and when they are most needed. Second, a class of professional speculators, in possession of intelligence, good forecasting skills and adequate financial means, conducts this activity. Doing so, speculators enable producers, manufacturers and savers to hedge against price risks and usually accelerate the convergence of market prices to their normal values. Third, the presence of amateur speculators is a disturbing element which makes it possible, and in some cases tempting, for professionals to profit from anticipating amateur opinion rather than price trends. When this occurs, speculation may amplify

¹As Marshall wrote on 26 October 1899 to Bishop Westcott: “I am just now working at the good and evil of Stock Exchange fluctuations. Like everything else which I touch in my second Volume, which will be more concrete than my first, I find it grows in difficulty in my hands”. In Pigou ed. (1925: 385).

²Emery's book was credited since its appearance as “without doubt the most thorough work on speculation written in English” (Ryan 1902: 337). Marshall perused it carefully. Marshall's reading notes and Marshall's own annotated copy of Emery's book are preserved in the Marshall Papers, Section 5 “Late Notes in Bundle” 13/2, in the Marshall Library of Economics, Cambridge, UK.

price fluctuations, pushing prices away from fundamentals with destabilizing effects. Dishonest professionals may go so far as to manipulate the amateurs' opinions by camouflaging their true intentions, spreading false information or by other illegitimate means.

While the main elements characterizing Marshall's view of speculation have already been investigated in the literature, three aspects deserve further analysis. First, whether Marshall deemed that destabilizing speculation could go so far as to overshadow normal prices completely, paving the way to Keynes's "casino finance". Second, whether the presence of amateur speculators should be accepted as inevitable or thwarted whenever possible. Third, whether, and if so to what extent, Marshall's positive view of speculation by professionals extended to all the speculative instruments and practices available at the time, from futures trading to short-selling and options.

Many recent contributions on Marshall and speculation revolve around Marshall's connection with Emery, mainly but not only in the light of their influence on Keynes (Lawlor 1994, 2006; Carabelli and Cedrini 2013). Our first aim is to expand this literature by emphasizing some aspects of context which are essential to shed light on the questions set out above. Our second aim is to discuss how those ideas connect with the debates of the time on the regulation of futures and option markets.

Regarding the first aim, Sect. 2 argues that the emergence of global organized commodity and stock markets at the turn of the twentieth century transformed the financial environment, notably in Britain and the USA. In this context, reconsideration of established ideas on speculation was called for, often against public opinion and its beliefs in the close association between speculation and gambling. This gave rise to an extensive literature, which, in the main, defended speculation by emphasizing its similarity with arbitrage and transport in space.³ Just as transport of commodities from sites of abundant supply to places where supply is scarce improves allocation in space, transport from times of abundance to times of (expected) scarcity, using futures, improves resource allocation over time. Extension of the transport metaphor from commodities to securities hinged on similarities between the two asset classes, with *caveats* about securities being particularly exposed to the risk of instability and manipulation due to greater difficulties in identifying their normal prices.

³Many authors employ the transport metaphor. See, for example, Carver in Emery (1900: 118), Hadley (1904: 105–106), Lavington (1913: 39–40).

Marshall's analysis moves along these lines and in this respect exemplifies this literature.⁴ Indeed, when Marshall defends constructive speculation, as he does in *Industry and Trade*, he does so discussing agricultural commodities. When he worries about the risks of manipulation by professional speculators against amateurs, as he does in the manuscript note and in *Money Credit and Commerce*, he focuses mainly on securities.

Marshall's considerations on the losses inflicted on amateur speculators by unscrupulous professionals, with echoes of his paternalistic attitude towards the lower classes and their economic well-being, intertwined with the theme of market accessibility and analysis of the advantages/disadvantages of market "democratization". As we observe in Sect. 3, opinions differed in the early literature on speculation in this connection. On the one hand, expert observers identified enhanced liquidity and diversity of opinion as the main advantages deriving from widespread market participation. On the other hand, as the number of traders increased, so did the share of amateurs and the incentive for professional speculators to reap profits by "fleecing" them, with destabilizing effects on the market. In Sect. 4, our reconstruction suggests that Marshall did not support the view that the presence of a large body of amateurs was necessary for markets to function effectively. Consequently, he was critical of instruments like options that made speculating too easy for too great a number of agents, intellectually and materially ill-equipped to do so. Section 5 concludes the chapter.

2 THE COMMERCIAL REVOLUTION AND MARSHALL AS PART OF THE EMERGING LITERATURE ON ORGANIZED SPECULATIVE MARKETS

Around the 1860s, technological advances in sea and land transport (transatlantic steamships, railways) and communications (e.g. the partial completion of telegraph connection to India in 1857, the laying of the transatlantic cable in 1866) contributed to the emergence of world markets for many staple commodities, in particular cotton and wheat. With the introduction of official grading systems, used for the purpose of commodity quality assessment it became possible to standardize forward contracts, paving the way to the introduction of futures. Concomitantly,

⁴We have discussed this literature elsewhere. See Paesani and Rosselli (2019).

security markets expanded in response to the financial needs of the companies involved in this commercial revolution.⁵

Far-reaching technological changes accompanied the emergence of organized speculative markets. Between 1867 and 1882, both the London and the New York Stock Exchanges brought in the use of ticker tape and the telephone. Both innovations allowed interested parties to be immediately and constantly informed about prices even if they were not on the floor of the Exchange. The possibility to draw large profits from this new facility attracted increasing numbers of traders. In London, membership of the Stock Exchange had risen from 864 in 1850 to 4855 by 1914. In New York, the number had risen to 1100 by 1879 and remained at that level until 1914 (Michie 1986: 174). Similar changes occurred in the case of commodities. Between 1875 and 1905, organized futures exchanges appeared in the USA, Canada, Europe and Latin American, although Chicago and Liverpool—the first European market to develop futures trading—acquired and maintained early prominence globally.⁶

As the business environment became more complex, the array of variables and risk factors to take into consideration increased. This created propitious conditions for the emergence of a new class of professional speculators, endowed with wide-ranging intelligence, financial means and ability to anticipate changes in market conditions. Acting on those anticipations, professionals, “dealing in things the futures prices of which are eminently uncertain” (Marshall 1919: 252), disseminated information, relieving local traders and small investors of risks they might find difficult to assess.

Eventually, the growth of stock exchanges and organized commodity markets gave rise to a flourishing literature,⁷ which distinguished speculation from gambling—two activities that public opinion often confused. One strand of this literature aimed to provide investors with practical information about trading procedures and their potential risks. Another,

⁵On this, see Michie (2007), Chs. 4 and 5.

⁶On the origins of futures trading, see Working (1953), Williams (1982), and Levy (2006) among others. On the Liverpool cotton market, see Hall (2000).

⁷On the rise of this literature, see Goss and Yamey (1976), Leathers and Raines (2008), and Berg (2011) among others.

more academic, strand focused on the positive contribution given by speculation to the efficient allocation of resources through enhancement of the allocative function of prices.

Many contributions to the second strand, including Marshall's own, sought to formulate a unified theory of speculation, equally applicable to both commodity and security markets. The gist of the argument in favour of the constructive role of speculation can be summarized as follows. Commodity price fluctuations are caused by real exogenous factors, mainly reflecting changing supply conditions. Intelligent speculators, acting pre-emptively based on correct information drawn from a global network, dampen fluctuations, conveying resources when and where they are most needed. The same argument is extended to securities, overly stressing similarities between the two asset classes. Securities, like commodities, are homogeneous, not readily perishable and standardized assets. They too are subject to price variability, although, in the case of securities, demand, reflecting expectations of future earnings, is the main driver of prices. Absence of monopoly conditions is another feature which the Stock Exchange shares with most commodity markets. Episodes of fraud and market manipulation were presented as exceptional and of little consequence in the long run.

Marshall's analysis of speculation does not distance itself from this approach. In *Industry and Trade*, Marshall focuses on commodity markets and identifies two main advantages as deriving from the activities of professional speculators: improvement in resource allocation and insurance against price risks. As for the improvement in resource allocation, being in possession of superior knowledge of prospective market conditions, professional speculation contributes "to increase the supply of things where and when they are likely to be most wanted, and to check the supply of things where and when they are likely to be in less urgent demand. This is its most conspicuous service" (Marshall 1919: 253).⁸ Buying (selling) forward on the anticipation of scarcity (abundance), professional speculators influence cash prices and accelerate the convergence of prices towards their long-run equilibrium values, reflecting the

⁸See also: "[...]a speculator, who, without manipulating prices by false intelligence or otherwise, anticipates the future correctly; and who makes his gains by shrewd purchases and sales on the Stock Exchange or in Produce Markets, generally renders a public service by pushing forward production where it is wanted, and repressing it where it is not" (Marshall 1920: 359fn).

needs of the economy. Their activity requires them to gather and master a range of information relating not only to the market conditions of the commodity in which they trade, but also of all the commodities that may substitute it or for which it may be a substitute (Marshall 1920: 281). Competition among professionals enhances the process of driving prices to their equilibrium values, making it faster, more accurate and less costly. In this way, far from causing volatility, speculation contributes to reducing it. Marshall refers to reports, which show the beneficial effects of speculation in reducing the amplitude of price fluctuations (Marshall 1919: 261, fn. 2). Moreover, Marshall's reading notes on Emery's book reveal his appreciation of Emery's attempt to bear out the claimed price stabilizing effect of speculation by providing data on cotton and wheat prices prior and subsequent to the establishment of organized markets.

Marshall's second argument in defence of speculation revolves around the insurance service which professional speculators provide the ordinary entrepreneur with, insuring him "against the risk that the materials which he will need in his business will not need to be purchased at an enhanced price" (Marshall 1919: 253). For example, millers who purchase wheat spot and need insurance against price falls that can affect the prices of both wheat and flour can sell their wheat forward and thus hedge against price risks. At the same time, millers who, having made contracts to deliver flour at a specified time, need protection against wheat price rises can find it on the futures market, buying wheat forward. Millers belonging to the first set seek insurance against the fall in the price of their output. Millers belonging to the second set seek insurance against the rise in the price of their input.

In so far as the sales of futures by the first set, and the purchases by the second, are for equal amounts and like times, the resulting risks cancel out one another: whatever excess of risk there is on the one side or the other remains to be borne by the dealers on the Exchange: and their shoulders are very strong for the work. (Marshall 1919: 260)

3 AMATEURS VS. PROFESSIONAL SPECULATORS AND THE PITFALLS OF EASY ACCESS TO MARKETS

Marshall's recognition of the advantages of speculation does not blind him to the possibility that "dealings in organized markets are liable to abuse by unscrupulous men, aided as they often are by the folly of ill-informed speculators", as the title of a section in *Industry and Trade*

reads (Marshall 1919: 262). Putting it in Marshallian terms, the difference between professional and “foolish” speculators seems to be one of power and character. As Raffaelli (1994: 122) defines it, man’s character: “is displayed in the way in which he grasps at immediate advantages or, on the other hand, tries to look further”. Based on this definition, amateur speculators, with their focus on short-term gains, show poor character. Professionals, on the other hand, possess the ability to foresee the long-run consequences of present actions and events and behave accordingly. This distinction echoes the contrast, dear to Victorian authors, between short-sighted individuals who cannot constrain their impulses and the morally superior agents who possess the ability to forecast the future and to abstain from immediate satisfactions, to the benefit of the whole society (Raffaelli 2003: 26–27).

Confidence in the constructive role of professional speculators does not exclude the risk that, occasionally, cliques of some of them, lured by the possibility to make a quick profit, may deviate from their standards, taking actions that contribute to destabilizing markets. On commodity markets, destabilization can take the form of a corner, where the clique gains control of the supply of a given type of commodity, subsequently “fleecing” forward sellers who must close their positions and buy from them at exorbitant prices. The presence of amateurs greatly enhances the effectiveness of these “shrewd business ventures, aimed at gains that must be balanced by losses to traders who are concerned in the same affairs” (Marshall 1919: 252).

The same problem occurs on a larger scale and more easily on the stock exchange. In general, stock prices respond to news which speculators react to. Occasionally, however, professionals may take a step further and manipulate the news and/or induce amateurs to move in the wrong direction. Selling stocks which they know will appreciate on the anticipation that amateurs will follow enables professionals to buy back those assets at a lower price, gaining both when the market is on the “wrong tack” and when “after the true state of the case is being brought home” it moves back to the right “tack” (Marshall in Dardi and Gallegati 1992: 589). These operations distort market prices with respect to fundamentals and end up with “fleeced” amateurs and professionals gaining extra profits, the fruit of deceit and market manipulation. When this occurs, speculation becomes malignant, as Marshall defines it.

S[peculation] is wholesome when it is an attempt of persons or groups of persons to obtain for themselves value for their judgements that anything is at a higher or lower price than the true one i.e. it would have if all the circumstances of coming D[emand] & S[upply] were known generally and rightly interpreted. It is malignant when endeavours are made to move the opinion of others in the direction opposite to that which the speculators believe to be the true one. This end is bad in itself but it cannot generally be pursued with any success without means that are detestable. (note dated 16.8.1904 in Marshall papers 5/13/2)

Discussing the relevance of these operations, and their apparently growing importance, however, Marshall observes:

The scale of operation is now larger than before; the prizes to be won are higher, and the resources at the command of the operators are more numerous and powerful. But on the other hand, competition is stronger, and the difficulty of keeping false news afloat without contradiction is greater. So and on the whole the manipulation of markets is not becoming easier. (Marshall in Dardi and Gallegati 1992: 591)

Nevertheless, the problem cannot be underestimated, and society should not stop searching for a solution to the threat to the correct working of markets represented by “international speculative combinations” which are “the source of some of the gravest practical problems with which the coming generation will have to deal” (Marshall 1920: 559).

Apart from open manipulation, professionals know how amateurs behave and can try to profit by anticipating amateurs’ reactions to incoming news rather than evaluating the long-run impact on fundamentals of the facts the news concerns. Professionals come into possession of news earlier on and can correctly calculate its short- and long-run impact on prices. Amateurs come into possession of news later on, when it becomes of public domain. In this sense, they are not gamblers acting at random, but ill-informed speculators who base their action on public news, not counting that “the latest information accessible to outsiders has nearly always been acted on by well-informed persons, and has exerted the full influence, belonging to it, before it reaches the public” (Marshall 1919: 264). Short-run fluctuations in prices drive amateurs’ decisions, often inducing them to make mistakes, which the more competent speculators are well aware of. “Hence it arises that by far *the larger part* of the

attention even of the leading operators is given not to the distant future but to the immediate future” (Marshall in Dardi and Gallegati 1992: 589; italics added). But in *Industry and Trade* Marshall became slightly more cautious:

It may indeed be said that shrewd, far-seeing speculators *sometimes* govern their own action, not so much by forecasts of the distant future, as by forecasts of the inaccuracy of the forecasts of that future. (Marshall 1923: 96; italics added)

Insofar as speculation focuses on the short-term response of market opinion to news rather than on fundamentals it can indeed become a permanent source of instability. It remains open to question whether Marshall went so far as to envisage that speculation could disrupt *enterprise* completely, as discussed by Keynes in Chapter 12 of the *General Theory*. On this Bateman (2006) and Dardi and Gallegati (1992) express different views. While, in Bateman’s opinion, Marshall envisaged the interaction between professionals and unwitting amateurs as an ephemeral factor, closely connected with the business cycle, Dardi and Gallegati (1992) emphasize Marshall’s preoccupation with that interaction, as well as his reluctance to make it public. Actually, as Dardi and Gallegati note, nowhere does Marshall express his doubts about the impact of speculation so clearly as in the 1898 manuscript, particularly when he admits that even the greatest financiers, although better equipped to foresee the future, indulge in guessing at public opinion. However, if we confine ourselves to his published works, Marshall seems to retain confidence in the market mechanism and the constructive role of speculation, especially on commodity markets, without being oblivious to its evils, due mainly to amateur speculation.

This topic is better understood in connection with the issue of market accessibility, which was widely debated in Marshall’s times. Reflecting on the effects deriving from the interaction between professional and amateur speculators, expert observers, from Crump (1875) to Brace (1913), were led to question the advantages of opening organized exchanges to small operators. On the one hand, widespread participation would increase marketability and diversity of opinion, with advantages for investors in terms of enhanced liquidity and reduction in the size if not frequency of price fluctuations. On the other hand, as the number of ill-informed

investors increased, so did the level of noise and the risk of incorrect price signals. Lavington (1913: 49) noted that

[D]eliberate manipulation by powerful interests is of little importance in the London market. [...] The evil appears to arise to a far more important extent from the continuous qualitative changes in many securities, and the consequent extreme difficulty in estimating their value. As a result of this any change of price originated perhaps by professional speculators, reacts upon public opinion and produces an unreasoning speculative activity which results not in correcting, but actually in reinforcing that change.

The question then arises as to whether it would be advisable to exclude small savers and amateur speculators from trading. As his reading notes reveal, Marshall differed from Emery on the important matter of the relationship between amateur speculation and price volatility. In Emery's view, the presence of large number of buyers and sellers, even if devoid of any special knowledge or opinion on the course of prices, constituted a price stabilizing factor per se.

The participation of the public, however, does increase numbers, and in normal times numbers themselves are a steadying influence in the market. The more buyers and sellers the less likelihood, in the long run, of wide fluctuations. Every movement of price has a more powerful body of opinion to resist. (Emery 1896: 190)

Emery contrasts this opinion with R. Ehrenberg's (1883: 206–208), who had argued that the influence of outside speculation on prices is bad because of the relative ignorance of the public of amateur speculators. Marshall sides with Ehrenberg and his idea of the harm caused by the presence of a large mass of amateur speculators. The large number is not a stabilizing factor because, far from guaranteeing diversity of opinions, it is a source of herd behaviour, as amateurs' opinions are easily swayed into the same direction, away from "true" prices.⁹ The same critical attitude towards amateur speculation and its contribution to the price discovery process emerges in *Money Credit and Commerce*. On the

⁹Marshall noted in the margin of Emery's book: "Ehrenberg is right because the public is not ignorant enough. It knows what mischievous professionals want it to know and so speculates not in all directions but dominantly on that side which is against public interest" (Quoted in Dardi and Gallegati 1992: 578, fn. 13).

fact that a rising number of operations does not necessarily mean better resource allocation, Marshall comments:

Thus stock exchanges are necessary auxiliaries of modern industry and commerce; and the services which they render to the public probably outweigh many times the evils which they cause to it. But the magnitude of the real services which they render by no means varies with the volume of operations on them, and amateur speculators are likely to lose their own fortunes, *with no gain to the public*. (Marshall 1923: 95; italics added)

Marshall is clear about the fact that stabilization of prices around normal (equilibrium) values does not depend on the number of speculators as such but rather on the presence of capable professionals, who act as a bulwark against occasional bouts of over-excitement in the market.

Therefore, although stock exchange machinations may occasionally set for a time, an unduly high value, or an unduly low value on a particular “security,” yet, in the main, the judgment of well-informed, capable men protects the general public from grave errors of judgment in their investments, so long as these are conducted with reasonable caution. (Marshall 1923: 91)

These considerations, and Marshall’s concern for the losses that amateurs are bound to suffer (“the amateur speculator is nearly sure to lose in the long run”, *ibid.*: 93), lead him to conclude that the market would work just as well if small and inexperienced investors did not have access to trading activities. On this matter, too, he differs from Emery, who defined as “chimerical” reform proposals aiming at limiting trading to the big speculators (Emery 1896: 191) who would not play their part with the same eagerness if they could not count on the handsome and easy profits deriving from the mistakes of the public. According to Marshall, on the other hand, curtailing the number of inexpert traders would improve the market mechanism by having men of character concentrate on normal prices rather than being tempted to anticipate the opinions of the amateur.

4 SHORT-SELLING AND OPTIONS: A PROBLEMATIC DEFENCE

As mentioned above, from the very outset the appearance of speculation aroused deep suspicion in public opinion, regarding it as an activity organized by the few in their own interest and to the detriment of everyone else. Because of this opposition, in the Anglo-Saxon world acceptance of all the instruments employed by organized speculation proceeded at a slow and intermittent pace. In 1860, the British Parliament repealed the Barnard's Act of 1734, which had tried to ban options, short-selling and trading on margins, making them illegal and subject to fines, and thus seriously hindering trade in futures (Banner 1998: 105–106). The prohibition had not, however, stopped the use of these instruments by professional traders. Even if the contracts were not enforceable in court, stockjobbers complied with their terms in order to preserve their reputation. The repeal of the Barnard's Act merely acknowledged that speculative trading had become “the regular and ordinary form under which the whole of that vast and beneficial business of dealing in the funds was conducted”, as claimed by a member of the Palmerston government who opposed the Act (Itzkowitz 2009: 101). Acceptance of futures was completed in 1895 when British courts decreed futures trading as a legitimate commercial transaction, entitled to enjoy the protection of law.

Opposition to futures largely derived from their use in short-selling. This practice was accused of depressing prices by placing enormous quantities of “fictitious” goods on the market. In Germany, in particular, agricultural producers at the end of the nineteenth century raised this accusation against dealers, pressing lawmakers to ban futures altogether.¹⁰ In 1911, after much turmoil, enhanced fluctuations in prices and migration of German futures trading to London and Antwerp, the law was repealed. The short-lived success of the attempt to ban futures in Germany confirmed how their abolition, far from achieving the much sought-after price stabilization, obtained the opposite result, as Marshall noted (Marshall 1919: 261).

¹⁰ Supporters of the abolition of futures in the USA drew inspiration from the success of the German agrarian party in this respect (Emery 1898). In the early 1890s, US farmers suffering from sharp drops in agricultural commodity prices blamed their condition on speculation on organized commodity markets. The ensuing anti-futures movement, which lasted until the 1920s, provided a number of platforms to voice this opinion (Banner 2017, Ch. 3, Hochfelder 2006).

Defence of short-selling by economists, including Emery and Marshall, revolved around two arguments. Firstly, without short-selling the market would lack a mechanism to curb unreasonable rises in prices. In a market dominated by bull speculators, the possibility to sell short on the anticipation of price correction might speed up adjustment, reducing the risk of speculative bubbles. Secondly, short sales, even when prices are expected to fall, still involve a forward purchase either of goods for delivery or of a futures contract of the opposite sign. These purchases prevent prices from endlessly falling. Putting forward these arguments, economists defended the idea that short-selling contributed to reducing the size of price fluctuations (see also Brace 1913: 65). Emery maintained that “perhaps the most potent influence in preventing wide fluctuations is the much maligned short-seller. It is he who keeps prices down by his short sales, and then keeps them strong by his covering purchases” (Emery 1896: 121). Marshall, in his notes on Emery’s book, approved and backed his opinion:

As Emery says p. 121 shortsellers do good in checking rise of price due to a wave of confidence: so when the fall comes it is less than otherwise. But Emery seems to treat this as a point; it is the point. If land could have been shortsold Melbourne crisis would have been less [...] [Emery] goes too far when he says ‘In a real estate boom only the sanguine affect the price on the rise and only the gloomy on the fall’. But he is right in saying that ‘at one end prices are more recklessly inflated and at the other more needlessly depressed than would be possible in an organised speculative market’.

In *Industry and Trade* Marshall reiterated the example of land speculation in Melbourne, which shows how short-selling can prevent bubbles. If it had been possible to sell land short “as soon as prices had gone a little beyond their reasonable level, the sellers would have enriched themselves, and conferred on Melbourne as a whole a benefit many times as large as their own gains” (Marshall 1919: 265, fn. 1).

Contemplating delivery of a good which was not in the possession of the seller at the time the contract was signed was essential to defend the idea that every short sale also implied a purchase and, more generally, to justify its use and legalization (Levy 2006). Consequently, contracts which allowed one of the parties to unilaterally avoid the obligation to deliver or which did not provide for any delivery at all were harder to defend against

the accusation of being instruments in the hands of gamblers. Such was the case of options.

Options, although widely used, not only did not enjoy the protection of the courts but were explicitly banned from the “floor” and traded outside the stock exchanges. Opposition to options reflected their being perceived as risky and destabilizing. Given that sellers might run into unlimited losses if prices did not fulfil their expectations, they would post quotations far from the ruling price in order to reduce the risk of the option being exercised, unless they were confident that the markets would move in their preferred direction, possibly with the aid of manipulation. Buyers, on the other hand, could be tempted by the possibility to exercise the option to over-trade, paying at worst the small option price. Observers regarded these conditions as propitious to gambling. As Marshall observed

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 straightforward dealer. (Marshall 1919: 257, fn. 1)

Someone like Marshall, who objected to the presence of small inexperienced investors on both theoretical and moral grounds, certainly had good reasons to contest the legitimacy of options. On this aspect too, however, his ideas were widely but not unanimously shared. The fact that the options enabled small speculators, with little capital, to enter into the market was not perceived as a problem by all. Brace (1913), for example, considered “as a question of practical morals” that options enabled unskilled traders to enjoy the pleasure of “playing the market”, knowing in advance the maximum loss they might incur.¹¹

Diversity of opinion on instruments that allowed people with limited means, but endowed with luck and talent, to enrich themselves quickly

¹¹ On the debate on market accessibility in France, see Preda (2009).

through speculation did not only depend on different theoretical conclusions but probably also reflected deeper divisions in market morality¹² and the legitimacy of a rigid class structure.

5 CONCLUSIONS

The idea that speculation exacerbates commodity and stock price volatility dates back at least from the second half of the nineteenth century in connection with the establishment of organized markets for commodities and stocks. The new commercial practices observed on those markets, including short-selling, raised controversies, with public opinion regarding those practices with suspicion as a new and dangerous form of organized gambling. In some cases, suspicion gave rise to calls for the outright abolition of futures and option markets, most notably in Germany and the USA.

Interest in the new trading practices gave rise to an extensive literature addressing different readerships. One strand of this literature, of a more academic or legal character, aimed at defining the relevant theoretical framework to understand the impact of speculation on prices and resource allocation for analytical and regulatory purposes. This framework built on a realistic representation of markets populated by agents, performing distinct functions and differing in terms of information, attitude to risk, and financial capability, with particular focus on interactions between professional and amateur speculators. A certain number of distinguished economists participated in the elaboration of this framework, including H.C. Emery and A. Marshall, on whose ideas this chapter has focused.

As argued above, Marshall's analytical arguments on the costs and benefits of speculation on organized commodity and security markets can be taken as representative of the scientific literature on the subject which emerged at the end of the nineteenth century. The essence of these arguments, originally applied to commodities and subsequently extended to securities, based on similarities between the two asset classes, was that speculation is mostly beneficial to the economy and society. Professional speculation, indeed, improves resource allocation by reducing the size

¹² Marshall remarks: "It is true that many of the largest fortunes are made by speculation rather than by truly constructive work: and much of this speculation is associated with anti-social strategy" (Marshall 1920: 598).

(if not frequency) of price fluctuations, enabling producers, manufacturers and traders to hedge against price risks and increasing the liquidity (and market value) of traded assets. These benefits more than offset the costs associated with occasional market manipulation by unscrupulous speculators, especially in the case of commodities.

In his analysis of the problems caused by the presence of short-sighted and ill-informed amateur speculators, Marshall distanced himself from Emery, whose opinions he otherwise endorsed. According to Marshall, amateur speculators add noise to the market and tempt professionals away from their fundamental (and constructive) duty, i.e. to insure non-speculators against price fluctuations and ease discovery of normal prices. As the number and weight of amateur speculators increases, so does the incentive for professionals to devote their resources to anticipating short-run fluctuations in amateur opinion, which may have little if any connection with fundamentals. Based on these analytical considerations, Marshall endorsed the use of futures and short-selling by professionals while opposing options, which he saw as dangerous instruments in the service of ill-advised amateur speculation.

It was awareness of the risks deriving from the interaction between professional and amateur speculators that led Marshall to unfailingly add words of caution to his endorsement of speculation, which was never complete. As Raffaelli (2003: 137) observes, comparing Marshall's views on speculation with Keynes's own, the main difference between the two is that "Marshall believed in the reality of objective economic trends, whose fundamentals were accessible to the 'constructive' forecasts of competent industrial businessmen, an idea which Keynes openly rejected". Both Marshall and Keynes believed in the possibility that speculation, an activity based on forecasting price changes taking place in the very short period, might have disruptive effects. But Marshall did not lose faith in the possibility of separating good from evil, constructive from malignant speculation. The "remedy is not easy, and may never be perfect" as he wrote in the last chapter of the *Principles*, but Marshall did not doubt that the progress of economic science would not fail to find a solution rendering an important service to the world. Unfortunately, this time he did not prove a good prophet.

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