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MARSHALL'S MACROECONOMICS: GREATER THAN NORMAL PROFITS AND UPWARD CYCLES

Michael J. GOOTZEIT*

Abstract: Alfred Marshall made famous the concept of “normal profits” in his *Principles*. After showing how Marshall described it there in a micro-context, this paper will illustrate how he extended the idea to the macro-content in parliamentary testimony, by discussing greater-than-normal profits as the main cause of an upward cycle. Such profits will be shown to be caused by a positive differential between what may be regarded as the “natural” interest rate, but what Marshall called “average interest,” and the “discount” rate. This positive interest-differential was also on what Wicksell later focused as the cause of an inflationary “cumulative process” in the short period. Therefore, there was a direct connection between Marshall’s ideas on profits in the *Principles*, his public statements, and Wicksellian macro-economics.

JEL Classification Categories: B3. HISTORY OF THOUGHT: INDIVIDUALS-E51. MONETARY SUPPLY; CREDIT.

1. INTRODUCTION

This paper will show how Marshall used the idea of greater than normal profits (called “windfall profits” by Schumpeter 1954, p. 894, n. 4) to justify how an expansionary cycle would be caused in the macro-economy. First, Marshall’s definition of “normal profits” (NP) will be explored. It will be shown that the NP rate was the minimum rate of profits consistent with a representative firm producing a given level of output. Furthermore, this gross profit rate was required to be large enough to cover two main opportunity costs: the earnings of management and the average or going market interest rate. It will be shown that Marshall, in some of the evidence he offered to Parliament in the 1880s, adapted this *Principles* definition so that if the “profitability” of the firm were greater than the market interest rate alone, this would cause an expansionary disequilibrium, during which prices would stop falling and may even start rising. This condition of “supernormal” profits could also lead to an upward cycle which would correct some of the problems of underinvestment the economy was experiencing.

The positive differential between the profit and market interest rate in Marshall

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will also be shown to be similar to Wicksell's concept of how a positive natural/market interest differential would lead to a cumulative process of prices rising in a disequilibrium fashion. Although Marshall never formally used the term: "natural interest rate," this was to what he seemed to be referring when he was describing the expected "average profitableness" of the representative firm.

2. MARSHALL'S DEFINITION OF NORMAL PROFITS

From a cursory reading of *Principles*, the most obvious definition of NP seemed to be a minimum on the rate of return to the owner of a representative firm in the long period: "*Normal* profit is essentially an opportunity cost, the minimum return necessary to secure the owner's inputs to their current use, or rather to accomplish this for an owner of normal [average] ability.... In long-period equilibrium each [owner] must just receive the same normal rates of return on his investment...." Whitaker (1987, p. 358; italics in original, bracketed words mine).¹ It should be noted that part of the return to the "owner's inputs" would be implicitly evaluated as what a hired manager of "normal ability" would earn at the prevailing rate; hence, the use of the term: "opportunity cost."

Other more specific definitions of NP may also be found elsewhere in Marshall. These definitions emphasized the "ability" of the entrepreneur just as did the previous selection, but also added the importance of covering necessary interest expense. One, at least, may be found in Marshall's non-*Principles* discussion of profits: "The supply price of the business man's ability must be taken on the assumption that his mind was like land on the margin of cultivation, that is, not that it made *no* return to the capital and labor spent in educating it, but that it made only ordinary profits, i.e. that it made (in addition to interest on the material capital used by him) just enough to pay the expenses of production of his business ability...." Marshall (1961, v.2, p. 674).² This definition of NP emphasized the fact that *two* necessary or opportunity costs of production existed: "interest" and "the expenses of production of business ability." Both of them should be paid back by ordinary or NP.

A similar definition of NP was also given by Marshall's description of interest in the *Principles*: "[An undertaker] would not, however, be willing to continue the business unless he expected his total net gains from it to exceed interest on

¹ The implication here was that if profit were lower than normal, the owner of the representative firm would not make the investment and the firm would go out of business: "This normal rate of profit may be loosely defined as the rate that makes it worthwhile to enter, and to stay in, business.... Somehow all this has grown into the simplified normal profit of Marshall's followers and then into the marginal efficiency of Keynes *General Theory*" Schumpeter (1954, p. 1049).

² Originally from Marshall's article: "The Theory of Business Profits," *Q.J.E.*, 1, 1887, pp. 477-481. This article was added as an appendix to Bk. VI, ch.8, by C. W. Guillebaud, the editor of the 9th (variorum) edition of the *Principles*.

his capital at the current rate. These gains are called *profits*”³ (Marshall 1920, Bk.2, ch.4, sec.2, p. 73; bracketed words mine, italics Marshall’s). Furthermore: “What remains of his profits after deducting interest on his capital at the current rate . . . is generally called his *earnings of undertaking or management*” (ibid., p. 74, italics Marshall’s). Together, these quotes treated “interest on capital” at the “current” or going rate and “management” expenses as the two necessary (and implicit) costs which must be covered in the long period.

The *equilibrium* rate of interest in the long period is further defined: “Thus then interest, being the price paid for the use of capital in any market, tends towards an equilibrium level such that the aggregate demand for capital in that market, at that rate of interest, is equal to the aggregate stock forthcoming there at that rate” (ibid., p. 534). The use of *tends towards* in this statement indicated that the interest rate would move gradually toward the level determined by “capital” market equilibrium. Only in the long run would it get there.

The implication of these several definitions was that NP for a firm existed in long period capital market equilibrium, when the “gains” or profits from a proposed business investment was exactly equal to the alternative cost of interest expense calculated at the equilibrium rate of interest, plus the average earnings which may be attributed to management.⁴

3. GROSS VS. NET NORMAL PROFITS

Marshall’s *Principles* contained two versions of NP: one was a “gross” (NP_G) and the other was a “net” (NP_N) concept, where profits equal zero, for the long run equilibrium of the perfectly competitive firm.⁵ Marshall’s *Principles* mainly focused on NP_G , which later writers have referred to as: “accounting profits.” $NP_G > 0$, because it had to be at least as large as the two opportunity costs (interest and management) which set a minimum standard on the earnings for any given firm. Furthermore, these implicit costs were not part of LRAC when NP_G was calculated. $NP_G = \text{total revenue} - \text{only market determined (explicit) costs}$; the two necessary (implicit) costs of interest and management were not subtracted, so $NP_G > 0$. Some 20th century interpreters of Marshall have also described normal

³ These *gains* will be distinguished as either *gross* or *net* later in this paper. It will be shown that if NP prevail, *net* profits will equal zero. *Gross* profits will be shown to have no implicit costs subtracted, while *net* profits, which will have all implicit costs subtracted, will equal zero in long run equilibrium.

⁴ The “average” earnings of management was never defined by Marshall, but this seems to be what he was driving at by treating these implicit earnings as a necessary cost. They might be defined as a long run concept: “. . . the annualized equivalent of the expected stream of earnings *just* sufficient to induce an individual [or a group of individuals] of normal [management] ability to found a firm in the industry rather than divert [their] energies and capital elsewhere” Whitaker (1987, p. 358; italics and bracketed words mine).

⁵ Marshall’s *Principles* (1920, Bk. 6, ch. 6, pp. 588–591) contained no careful comparison of gross vs. net normal profits. See Gootzeit (1994), where such a task is attempted. But, the *Principles* did contain a description of gross vs. net interest. Much of this analysis of interest dwelled on the subject of “risk.”

profits as being greater than zero. But, they have over-simplified the NP_G concept in Marshall's *Principles* by choosing to emphasize going management earnings as the *only* important imputed production cost,⁶ thus neglecting interest as a relevant opportunity cost. For these interpreters, this meant that only the average earnings of management would set the required minimum level for NP_G . In long run equilibrium for a firm: $NP_G = \text{going management earnings}$.

The idea that normal profits were zero may be attributed to the writers on imperfect competition in the 1930's. They described Marshall's ideas on perfect competition in such a way that long run equilibrium for a firm meant normal, or what has since been called: "zero economic profits" ($NP_N = 0$). Furthermore, they calculated normal profits as equal to total revenue minus all costs, whether explicit or implicit. Like other interpreters, they chose to regard management earnings as the only implicit production cost, so the relevant equilibrium condition was: $NP_N = NP_G - \text{going management earnings} = 0$. Going interest cost was not subtracted.⁷ The concept of NP_N was therefore an extension of the concept of NP_G , which emphasized that in the long run, a firm's profits would tend to zero.

Although Marshall's *Principles* mainly focused on NP_G , his testimony before parliament in the late 1880's focused on NP_N , where he utilized a short run disequilibrium analysis to describe cycles. Such an analysis was not contained in the *Principles*. This paper will examine his testimony to the Gold and Silver Commission and show that Marshall believed that, in the short run, a firm may be in a disequilibrium position, such that NP_N may be non-zero. An upward cycle for the macro-economy during which both prices and real income were pro-cyclic would be caused by $NP_N > 0$ and a downward cycle by $NP_N < 0$, because Marshall generalized his results for a firm, to the whole economy. While including both management earnings and interest as important opportunity costs in the *Principles*, in this testimony it will be shown that Marshall focused exclusively on the latter. It will also be shown how the formula used by Marshall: $NP_N = NP_G - \text{going interest cost}$, may be adapted into the interest-rate-differential formula which Wicksell used later to help explain the "cumulative process."

⁶ e.g., Blaug (1978, p. 425), believing that only management earnings should be treated as a necessary cost, seemed to define NP in Marshall as consisting exclusively of these costs, leaving out opportunity interest cost altogether: "Marshall's gross earnings seems to correspond to the common [or normal] definition of 'profits' when it is calculated inclusive of wages of management" (bracketed words mine). Schumpeter (1954, p. 894, n.4) made the same qualification: "... Marshall's ... treatment of the earnings of management contains the substance of the theory of normal profit."

⁷ Since most interpreters have neglected interest as an important necessary cost for Marshall, they have consigned it to the role of an explicit accounting cost, which was already subtracted by the time NP_G was calculated. But, exactly which other accounting costs should be subtracted in order to calculate NP_G , was neglected by these interpreters, as it was by Marshall himself. See Gootzeit (1994) on Marshall's concept of *normal supply price*, which does describe in some detail, exactly which accounting costs should be included in Marshall's LRAC function.

4. MARSHALL'S CUMULATIVE PROCESS

Writers on the history of monetary theory have made it clear that there was a definite relation between Marshall's and Wicksell's ideas on how a potential inflationary economic expansion would occur in the economy e.g., Rist (1940) and Marget (1938).⁸ "... Wicksell took up Marshall's theory and developed it to its final consequences in a book..." Rist (1940, p. 298) was referring to: Wicksell (1898). These writers were interested in the relation of Wicksell's to Marshall's ideas on how a "cumulative process" (CP) would occur. They focused on how Wicksell adapted Marshall's idea that a positive differential between what Wicksell called the "natural" interest rate and the rate of discount or "loan rate" would cause the economy to expand, while simultaneously, prices would rise: "A rise in prices may be initiated, he [Wicksell] says, by a wide enough gap between the bank's discount rate and what he calls the 'normal' or 'natural' or 'real' long term rate of interest. He [Wicksell] does not consider that this rate is identical with Marshall's 'equilibrium' rate, but the two conceptions are very close to one another" (Rist, bracketed words mine). Rist was suggesting that Wicksell's writings used ideas found in Marshall's when it made direct comparisons between the natural and loan rates. Therefore, much of Wicksell's description of how a natural/loan interest differential would cause an inflationary CP might have come from Marshall.

Although the natural rate was "not... a rate that is actually in operation, but... a theoretical rate, an intellectual construction" (Rist, p. 298), it was still heavily emphasized in Wicksell's writings in order to make practical predictions regarding how prices would change in the near future. But, there were many possible definitions.⁹ One of the main definitions for the natural rate suggested by Marget was: "... the anticipated profit to be made by the use of a money loan" Marget (1938, p. 197, n. 113; see also, p. 198, p. 204). Furthermore, this Wicksellian definition represented "the heart of the classical tradition" (Marget, p. 204), the implication being that since Marshall was another classical economist, he also must have used this definition for the natural rate.

It will be shown that Marshall employed such a definition of the "natural rate" without formally defining it or even using the name in his 1887-88 parliamentary testimony to the Gold and Silver commission; although this concept appears to be absent in the *Principles*.¹⁰ This testimony also contained a macro-analysis of cycles which chose as its equilibrium condition: $NP_N = 0$, a condition which was not regarded as important in the *Principles*. Marshall wished to describe how an upward cycle could occur in the relatively short period if NP_N became > 0 . In

⁸ This connection between Marshall's and Wicksell's macro-ideas on the transmission mechanism of inflation, has largely disappeared from modern books on the history of economic thought.

⁹ Marget (1938, pp. 202-203) gave six such definitions from Wicksell (1898) alone.

¹⁰ The concept of the "natural" interest rate is impossible to find, at least in the index to the 9th (variorum) ed. of the *Principles*.

order to do this, he used an analysis amazingly similar to Wicksell's CP. For such an upward CP to occur, the "natural" (i_N) must be greater than the "loan" (i_L) rate of interest; a positive 2-rate-interest-differential must exist.¹¹

In his 1887–88 parliamentary testimony, Marshall chose as a proxy for the natural rate: "the average level of interest." As in Wicksell, this rate was determined by the expected "profitableness of business:" "The average rate of discount permanently is defined by the profitableness of business... The average rate of discount is determined by the *average level of interest*... and that is determined exclusively by the profitableness of business..." Keynes (1926, p. 41, question 9651; italics mine).¹² In this statement, Marshall was saying that in long run equilibrium ("permanently"), i_L ("the average rate of discount" or the "loan" rate) will adjust itself, so that it would be equal to i_N ("the average level of interest" which was determined by the "profitableness of business"). He didn't say it, but this statement also implied that normal profits would exist if this condition held. This meant that the concept of normal profits was reduced to this long run equilibrium condition: $NP_N = (i_N - i_L) = 0$ and $NP_N = (i_N - i_L) > 0$, would mean a disequilibrium expansionary process, an upward CP, would occur in the short period. The right side of this formula may be interpreted as a Wicksellian 2-rate-interest-differential. See Gootzeit (1993).¹³

Although Marshall used the term "profitableness" in his parliamentary testimony, it was never used exactly in the same way that he described "normal profitableness" in the *Principles*. In the latter, NP was described in a long run context as a condition for the representative firm to remain in the industry. In the testimony, Marshall predicted that when profitableness was greater than normal, an upward cycle for the macro economy would occur in the relatively short period. A strong relation was thereby established between "profitableness" and "normal profitableness," as will be shown in the next section. It should be noted here that Marshall's testimony used the terms: "profitableness" to determine the "average" (long term or natural) rate¹⁴ and "rate of discount" to describe

¹¹ See Gootzeit (1993) on how Wicksell utilized this differential to describe an upward CP.

¹² See also Marget (1938, p. 184, n.74), which is drawn from the answer to this question. The terms "average" and "permanent" indicated that Marshall still couched his essentially short run analysis of cycles in long run terminology. This was similar to what Wicksell did when he described the cumulative process. See Gootzeit (1993) on this point.

¹³ The rate of discount was therefore regarded as the only opportunity or necessary cost of doing business. The opportunity cost of management, the other necessary cost in the *Principles* which set the standard for normal profits, was omitted from Marshall's parliamentary testimony. As mentioned above, 20th century interpreters of his concept of normal profits have instead chosen to focus on "management earnings" as the one and only necessary production cost for the representative firm.

¹⁴ This identification of the profit with the interest rate was an example of what Panico states "... was a general tendency in the economic literature... to use the terms 'interest' and 'profit' as equivalent" Panico (1988, p. 36). Although the profit "determined" the interest rate, it was not "equivalent" to it. Panico was describing Senior's ideas on interest and profit from the 1830's. An even more telling similarity with Marshall's treatment is then given: "Fullarton explicitly claimed that the interest rate 'may be essentially identified with the rate of profits on capital'... and made the latter rate regulated by the *average* interest rate." (ibid., italics mine).

the going short term or loan rate in a manner similar to the way that Wicksell later used these terms. The testimony also indicated quite clearly, as will be shown in the next section, that an upward CP for the whole economy would take place, when ($i_N > i_L$). This also implied that when profits were normal, the economy would neither expand nor contract, an equilibrium result which was consistent with the *Principles*, although it was applied there only to a representative firm in a given industry, not to the macro economy. See Gootzeit (1994).

The idea of a macro CP caused by a positive differential between the expected profit rate of business and the effective loan rate came to Marshall and Wicksell from the early classical economists.¹⁵ Wicksell, like Marshall, used the idea that the “expected profitableness of business” would have a strong influence on the demand for investment, but he specifically defined “profitableness” as the “natural rate” of interest, something Marshall never did. Wicksell’s description of a short run inflationary expansion for the economy, while generally consistent with Marshall’s, also differed because of the fact that Wicksell was more interested than Marshall in what would cause inflation. Wicksell even made the assumption that full employment prevailed, so that any expansion was *purely* inflationary, something Marshall never did.¹⁶ See Gootzeit (1993). Instead, in his evidence before the Gold and Silver Commission, Marshall was describing how the nation could emerge from a devastating recession with falling prices. It will be shown that Marshall focused more on how eliminating deflation would help the economy, rather than on how inflation would be caused.

5. GOLD IMPORTS CAUSED AN UPWARD CUMULATIVE PROCESS

It will be shown that Marshall recommended gold imports during his testimony before the Royal Commission on the Values of Gold and Silver (1887–88) on how to lift the economy out of a chronic depression. Marshall was in effect adapting the definition of NP applied in the *Principles* specifically to the case of the representative firm in long period equilibrium, to apply instead to the case of disequilibrium of the aggregate economy in the short period. He tried to prove his case by noting that the relation between the discount rate and the expected profit rate was very important when businesses were deciding on future investment

¹⁵ “Any divergence of the actual rate of interest charged on loans from the ‘natural’ rate, owing to a change in the supply of money, could, according to the *classical economists*, be only of a temporary duration. Such divergences would set in motion a process, similar to that described by Marshall, of cumulative changes in prices and in demand for loans, which would continue until the market rate of interest was brought in line with the ‘natural’ rate” Eshag (1965, p. 57; italics mine). Note 50, which is appended to this material, references Ricardo, Thornton, and J. S. Mill. I wish to thank T. Humphrey, of the Richmond, VA FED for suggesting this point.

¹⁶ Marshall, in other contexts, did make an “implicit assumption” of full employment: e.g., when describing his “supply schedule of capital” Eshag (1965, p. 50).

decisions.¹⁷ He was describing a macro-business-cycle theory where many firms and whole industries would attempt to expand if the expected differential between these two rates became positive in the presence of the importation of gold. This meant that the economy and (by implication) the majority of firms in it were earning greater than normal, what may be called “supernormal profits” (SP). Moreover, the concept of SP used in Marshall’s testimony to parliament, was being described in much more of a short run “macro” context than the NP concept.

Marshall regarded NP as an equilibrium concept because profits were just high enough to maintain the representative firm’s current output level. He regarded SP as a disequilibrium concept because he described it in the course of recommending how a real upward cycle could be created where many, if not most firms’ current output would expand.¹⁸ SP would exist if the going profit rate, the “average (or normal) profitableness of different business” (i_N) became greater than the falling “rate of discount” (i_L) when gold was imported; moreover, this would cause prices to rise:

“In my view the rate of discount is determined by the average profitableness of different business; that is . . . the amount of capital that is seeking investment as compared with the opening for new docks, new machinery . . . by the belief that people have that prices will rise or fall . . .”

. . . “the influx of a little extra gold . . . causes . . . the rate of discount [to] fall below its equilibrium level . . . and therefore stimulates speculation.”

. . . “this new [lower] rate effects the equilibrium by causing capital to go into the hands of speculators . . . and whatever form their speculation may take, it is almost sure . . . to *raise prices*. This is the main issue” Keynes (1926, pp. 130–31, question 9981; bracketed words and italics mine).¹⁹

This testimony appeared to be given using the context of rising prices. But, the

¹⁷ “. . . it would be still more difficult to justify Wicksell’s criticism, in view of Marshall’s emphasis on the importance of the relation between the rate of discount and what he called “the profitableness of business,” Marget (1938, p. 184, n.74). Marget was referring to Marshall’s evidence before this commission.

¹⁸ Marshall’s ideas on how an expansionary cycle may occur have already been noticed: “Marshall’s observations on the trade cycle are scattered throughout his work, and hidden in the minutes of evidence of several Royal Commissions” Wolfe (1956, p. 90). Furthermore: “The trade cycle is given explicit and extensive treatment by Marshall” (18, p. 91).

It should be noted that Wolfe described Marshall’s theory of the trade cycle in reference to his discussion in *Money, Credit and Commerce*, while this paper is referring mainly to this evidence before the Gold and Silver Commission. Wolfe referred to how Marshall used the “real rule of interest as an element in his trade cycle theory” (18, p. 94). But, this was simply the deflated version of the nominal interest rate, not what will be discussed presently as the “natural” interest rate. It will be shown that Marshall believed variations in the natural in relation to the discount rate would cause an expansionary cycle in a manner similar to Wicksell’s description. This analysis of the cycle was neglected by Wolfe.

¹⁹ This reference was also used in an expanded form in Rist (1940, pp. 294–295, n. 1).

background of Marshall's argument should be carefully noted. Rist (1940, ch. 7, sec. 2: "Marshall's Evidence before the Currency Commission, pp. 291–297) interpreted this testimony in great detail. Part of this discussion emphasized that Marshall's evidence was given in 1888, at the end of a 15 year period during which prices had steadily fallen (Rist, pp. 291–293).²⁰ Furthermore, there had been a "depression in trade and agriculture" during the period which "was a source of great anxiety to government" (ibid., p. 291). The substance of Marshall's testimony was then to recommend a policy to the government (gold imports) which would stop prices from falling and start them to rise, at the same time helping to pull the nation out of its depressed state. Even if Marshall did not emphasize it directly in his testimony, the problems he was addressing were related to an economy saturated with excess capacity and underemployment. This meant that if an upward CP was caused by the discount or loan rate (i_L) falling below the natural rate (i_N), it would cause both employment and real income to increase in the relatively short period, as well as causing a mild inflationary trend.²¹

According to Rist, "Marshall . . . made the discount rate exclusively instrumental in bringing about" (p. 291) the desired "reversal of the price movement" (p. 294). i_L was described to fall when the trade policy of the nation was such that it would encourage an influx of "foreign gold" which would, with cooperation of the banking system,²² "act as a stimulus to the production of goods, to the demand for raw materials, the services of labor, etc." and gradually to "a general rise in prices" (p. 292).

From 1873 to 1888, however, the discount rate had fallen steadily, but prices had not begun to rise. Marshall explained away this fact by noting that i_N helped to determine i_L and that over such a period of falling prices, both rates may have moved downward together (ibid., p. 294)²³ under conditions of sub-normal profits ($i_N < i_L$). The one thing that could disturb this long run tendency to falling prices was an influx of foreign gold:

The peculiar kind of fall in the discount rate following an influx of the precious

²⁰ Eshag (1965, p. 54) described an inflationary cycle in Marshall's testimony before the Gold and Silver Commission. He showed how equilibrium would be regained when the 2-rate-interest-differential fell to zero when the market "rate of interest is raised again" as prices continued to rise. He did not consider, however, the importance that Marshall attached to eliminating the general deflation faced by the economy.

²¹ In the course of discussing Marshall's ideas on the "trade cycle," Wolfe also described the role of price fluctuations in transmitting a cycle throughout the economy: "Short run movements of the general price-level are in Marshall the principal mechanism for the propagation of cyclical disturbances" Wolfe (1956, p. 91).

²² Marshall felt that the banking system played a critical role in how foreign gold entered into "national circulation," because "the precious metals operate principally through the banks" (ibid., p. 292).

²³ The center about which discount fluctuates . . . is determined by the profitableness of business" Keynes (1926, p. 51, question 9684).

"My position is that the mean rate of discount is governed by the mean rate of interest for long loans . . ." (ibid., question 9686).

metals, which marks the change in the direction of interest rates, is, to use Marshall's term, only a temporary 'ripple' on the surface of the discount level,²⁴ which soon gives way to a rise; but this 'ripple' is enough to provoke a *reversal of the price movement*, which will last as long as the influx of precious metals, and their direct or indirect entry into circulation, is great enough to maintain the new price level (*ibid.*, p. 294).

This "reversal of the price movement" from falling to rising would thus be caused by an import of gold and correspond to a short run disequilibrium, an upward CP, characterized by an excess demand for credit to purchase new investment goods: "This fall [in the rate of discount]... encourages borrowing on the part both of speculators and industrialists" (*ibid.*, p. 292; words in brackets mine). Marshall was describing a process by which each firm would compare its profitableness (i_N) to the discount rate (i_L) and if ($i_N > i_L$), profits would be greater than normal or "supernormal." This would lead to an increase in investment demand (called "speculation" in the answer to question 9981, Keynes 1926, p. 131). Because the economy was assumed to be in the midst of a depression, it would soon lead to an increase in employment and real income.

Marshall's ideas on an upward CP, caused by a positive 2-rate-interest-differential, during which firms believed that profits were greater than normal, has also been described by Schumpeter as "windfall profits." Schumpeter distinguished "... normal profits from those *windfall profits* that result from the operation of the monetary system... But we may note that Marshall's obiter dicta on the cyclical behavior of credit and prices contain the germs of a theory of *windfall profits* of this type... Schumpeter (1954, p. 894, n. 4; italics mine). It is these "windfall profits" which have been called "supernormal profits" above. SP were clearly greater than NP,²⁵ which meant that all representative firms would attempt to expand. If excess capacity existed, they would be successful, and a real macro-economic expansion would occur.

6. CONCLUSION

It has been shown that Alfred Marshall discussed the concept of "normal profits" (NP) in the *Principles* and it has also been used by subsequent writers. But, it has always been unclear as to that exactly Marshall meant by this concept. For example, Marshall defined NP as a "minimum" return to the representative firm in order for it to continue operating in the long period. In this context, he stated that minimum or "gross" profits should be positive (not zero) and at least equal to the sum of market interest cost and earnings of management. These two

²⁴ The actual quote from Marshall is this: "All that the influx of gold does is to make a sort of ripple of the surface of the water" Keynes (1926, p. 41, question 9651).

²⁵ Schumpeter made this point when he compared "windfall" with "normal" profits, directly after the quote just given (*ibid.*, p. 894).

costs were not even regarded as explicit; they were imputed instead as what the firm would have to pay yearly to borrow all its capital advances and to pay “inside” the same salary as if it employed “outside” managers. In other words, profits should yield at least a reasonable “average” annual return to the value of the firm’s capital plus entrepreneurial talent. Interpreters have generally not noticed both of these two opportunity costs in Marshall’s writings on profits; instead, they have generally selected only the latter as relevant when defining NP. This paper has instead focused on the former; the market interest rate has generally not been given the emphasis it deserves in helping to explain Marshall’s treatment of how cycles may occur in the economy.

Marshall never formally defined what has here been called “supernormal profits” (SP). But, his testimony to the Royal Commission on the Values of Gold and Silver (1887–88), was meant to describe how credit policy in the presence of an influx of foreign gold could help the English economy get out of a chronic depression with falling prices. He used the idea that if profits were greater than normal (or the “average profitability” of business were greater than the market loan or “discount” rate), then disequilibrium would prevail in the economy, and an upward “cumulative process” would occur in the short period. An important side effect of such an upward cycle would be the elimination of deflation, and the start of inflation, what Rist (1940) called the “reversal of the price movement.” This was an important benefit of an exogenous inflow of foreign gold which would cause the banking system to expand the supply of credit and lower the loan rate. Thus, Marshall used his idea of NP (an equilibrium concept applied in the long period to a representative firm) to describe how greater than NP, or SP, would cause nearly all firms to attempt to more fully utilize their productive capacity or even to expand it, by making new investments. Furthermore, SP meant that for nearly all firms, gross profit, minus opportunity interest cost alone, was positive.

Some interpreters of Marshall such as Rist (1940) and Marget (1938) have described Marshall’s ideas on how an influx of foreign gold would help the economy. They have also likened Marshall’s to Wicksell’s ideas because both writers described how a positive 2-rate-differential between the natural and market interest rate could be created by the excess supply of credit created by such a net gold inflow.²⁶ This interest-differential would also cause an expansionary cumulative process in the economy. But, these interpreters have not noticed the relation between Marshall’s testimony to the Royal Commission and his ideas on NP stated in the *Principles*.

A problem with Marshall’s analysis both in the *Principles* and in the parliamentary testimony was that he never formally defined what he called “the average level of interest,” as what Wicksell called the “natural” interest rate. This makes it more difficult to establish a direct connection between Marshall’s *Principles*, his testimony and the Wicksellian literature. But, since the “average”

²⁶ See Gootzeit (1993) on exactly how such a positive interest-differential would be created for Wicksell’s system.

interest rate was determined by the “profitableness of business,” as in Wicksell, this rate seems sufficiently close to Wicksell’s natural rate concept. Therefore, Marshall’s main writings on NP in the *Principles* and the ideas he stated publicly regarding cycles were related and they were also both connected to the macro-methodology of Wicksell.²⁷

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²⁷ Wicksell’s macro-methodology was, in turn, connected to the macro-methodology of D. Davidson and F. Hayek. See Gootzeit (1992b).