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I am indebted to Ron Bodkin for discussing with me the issues taken up in this paper, and for encouraging me to write it.

I. <u>Introduction</u>

Adam Smith's contributions to the analysis of problems of allocation, distribution, growth, and development were unquestionably of extraordinary importance for the subsequent evolution of economics. However, when it comes to monetary economics his work is seldom praised, and frequently discretely ignored. Though more space in the Wealth of Nations is devoted to monetary matters than, say, to the division of labour, most commentators on the book pass quickly over what he has to say here, pausing sometimes to note, with considerable discomfort, that Smith is the originator of the Real Bills Fallacy, and sometimes to criticize him into the bargain for confusing money and capital, or for ignoring his friend David Hume's (1752) analysis of the price-specie-flow mechanism.

It is surely something of a puzzle that so great an economist could slip up so badly in such an important area, but one implication of this paper is that perhaps the solution to this puzzle is to be sought more with the commentators than with Smith. In the following pages I shall give an account of the monetary analysis presented in the Wealth of Nations, in the hope that such an account, in and of itself, will convince the reader that there is more credit due to Smith as a monetary economist than is usually granted him.

II. The Theory of the Price Level

The main body of Smith's monetary economics is to be found in the long Chapter 2 of Book II of the Wealth of Nations, "Of Money...". Whatever else one may say about the chapter, it is certainly not one of the most readable in the book. Much of the difficulty stems from the long digressions

into the history of the Scottish banks and into comparisons of English and Scottish banking practises that the chapter contains, but there is a further, and more fundamental problem with its exposition. "Of Money..." is concerned with the effects of banks and paper money on the productive capacity of the economy, and with their influence, if any, on prices. However, it is not until the very end of the chapter that Smith sets out an explicit statement of his theory of what we would now call the general price level, even though that theory is an important basis for much of the earlier discussion and would much better have been set out at the beginning of the chapter. The statement in question is worth quoting in full:

"The proportion between the value of gold and silver and that of goods of any other kind, depends in all cases, not upon the nature and quantity of any particular paper money, which may be current in any particular country, but on the richness or poverty of the mines, which happen at any particular time to supply the great markets of the commercial world with those metals. It depends upon the proportion between the quantity of labour which is necessary in order to bring a certain quantity of gold and silver to market, and that which is necessary in order to bring thither a certain quantity of any other sort of goods."

(P. 254)

Smith, then, regarded the relative price of goods and specie as being determined, like any other relative price, by costs of production, and in particular labour costs. There is not space here to go into the well known fact that Smith was not always clear about the distinction between a cost of production theory of value and a labour theory of value, or to do more than note that, in attributing a particular importance to the production costs of newly mined gold, the above quotation avoids facing up to the kind of stock flow distinction upon which much modern theory thrives. In any case, the important point is that Smith states a theory of the general price

level of goods in terms of specie that is much the same as that to be found in the writings of many of his successors, not least in Ricardo's <u>Principles</u>, and even more important, that it is a theory that helps us to make sense of much that otherwise seems peculiar in his monetary economics.

Even in the context of the state of knowledge in 1776, the passage just quoted is not beyond criticism. Smith used the cost of production (or labour) theory of value as an explanation of "natural" price, and the latter is usually interpreted as being akin to Marshallian long-run equilibrium price. In his discussions of the allocative mechanism, he always distinguished carefully between market price and natural price, and placed deviations between the two at the very heart of his description of the way in which market mechanisms operate to reallocate resources from one use to another in the face of changes in the conditions of supply and demand. This distinction is conspicuous by its absence in the passage just quoted, and that absence is closely related to Smith's failure to incorporate Hume's price specie flow mechanism into his monetary analysis. Nevertheless the effect of this omission is to render Smith's analysis incomplete rather than erroneous, and since, as I shall show, the problems with which he dealt were fundamentally long run in nature, the incompleteness in question is far from fatal.

III. Bank Money and the Balance of Payments

Smith consistently argued that what we would now call the quantity of money is an endogenous variable, and that if a banking system emitting paper money were to develop in any economy, its operations would have no effect on prices. As he put it:

"The whole paper money of every kind which can easily circulate in any country never can exceed the value of the gold and silver, of which it supplies the place, which (the commerce being supposed the same) would circulate where there was no paper money." (P. 230).

The qualification in parentheses in the above quotation is important from Smith's point of view. As we shall see in due course he believed that "commerce" usually would increase with the introduction of paper money. However, we may at this point follow him in accepting that qualification as a working simplification and note that he rested his belief in the endogeneity of the money supply on the idea that there existed what he termed a "channel of circulation" whose capacity to carry money was, given the level of "commerce" prevailing, fixed. The concept in question must strike the modern reader as an odd one, but Smith used it in much the same way as modern monetary economists use the notion of a stable demand for money function.

This is not to say that Smith had any idea whatever of what we nowadays would call a demand for money function; that is very much a twentieth century device. As is well known he did not even have the general notion of a demand curve and conceived of the demand for a good as a "force". When dealing with allocative questions he typically talked about market prices responding to variations in the "ratio" of demand to supply. However as is equally well known, the fact that Smith did not use the concepts of supply and demand in the way in which we do nowadays did not prevent him from dealing with the allocative role of prices determined in competitive markets and achieving results very much the same as those yielded by modern analysis. In the same way he used the idea of a "channel of circulation" to deal with the consequences of the introduction of paper money into an economy with results that modern adherents of the monetary approach to balance of payments analysis would derive with the aid of the concept of stable demand for money function, as the following passage illustrates quite clearly.

"Let us suppose,...that the whole circulating money of some particular country amounted, at a particular time, to one million sterling....Let us suppose too,...that different banks and bankers issue promissory notes, payable to the bearer, to the extent of one million, reserving in their...coffers...two hundred thousand pounds....There would remain...in circulation..eighteen hundred thousand pounds of paper and money together...[T]he channel of circulation...will remain precisely the same as before. One million we have supposed sufficient to fill that channel. Whatever, therefore is poured into it beyond this sum cannot run in it, but must overflow."

(P. 224)

A modern monetary economist would not talk in terms of more money being poured into a channel than it could hold in describing such an experiment; rather he would talk of the supply of money being increased in the face of a constant demand for it and an excess supply of money thereby being generated. However, he might well continue with a hydraulic analogy very like Smith's by remarking that the excess supply of money would have to "spill over" somewhere or other. He would also tell us that just where and how the spill-over in question would occur and with what consequences would depend upon just those features of the economy about which Smith was particularly specific.

First, how an economy reacts to an excess supply of money depends upon whether or not it is operating at full employment. Smith always took full employment for granted as the equilibrium state of affairs, regardless of what was happening to the quantity of money and held the volume of "commerce" constant in the experiment we are discussing. Second, much depends on whether we are dealing with a closed or an open economy. Smith was quite clear that he was discussing an open economy. Finally, what we would now call the nature of the exchange rate regime will affect the outcome of an experiment such as this one. Smith explicitly envisaged bank money taking the form of "promissory notes payable on demand", and by that he meant payable in specie. Moreover he regarded

the price of goods in terms of specie as being determined by relative production costs in "the great market of the commercial world". In modern terminology, then, Smith's domestic banks operated a fixed exchange rate against an international currency whose value was determined on world markets. On these assumptions the modern monetary economist would argue that an excess supply of money will "spill over" into a temporarily adverse balance of payments until it is eliminated; and so did Smith.

"...though this sum [eight hundred thousand sterling] cannot be employed at home, it is too valuable to be allowed to lie idle. It will...be sent abroad....But the paper cannot be sent abroad, because at a distance from the banks which issue it, and from the country in which payment of it can be exacted by law, it will not be received in common payments. Gold and silver therefore, to the amount of eight hundred thousand pounds will be sent abroad, and the channel of home circulation will remain filled with a million of paper instead of a million of those metals which filled it before" (P. 224)

This is not quite a statement of the modern "monetary theory of the balance of payments". The latter doctrine deals with the interaction of domestic monetary policy and the balance of payments conceived of as a policy target, and Smith had no conception of a central bank manipulating its assets and liabilities in order to achieve any policy goals. Though he got as far as recognising that the Bank of England was "a great engine of state" rather than just another commercial bank, he remained silent upon just what engine might be used to accomplish. It was left to his successors, notably Henry Thornton (1802) to develop the theory of monetary policy as we would nowadays understand it.

Nevertheless, the passage just quoted bears a much more obvious resemblance to the monetary theory of the balance of payments than anything David Hume wrote because the distinction between specie and paper in Smith's analysis corresponds to the modern distinction between money backed by domestic credit

and money backed by foreign exchange reserves upon which that theory hinges. Hume was concerned with the international allocation of specie, seldom mentioned banks and paper money, and never made any systematic attempt to integrate them into the heart of his analysis, which therefore contains no distinction analogous to that between domestic credit and reserves.

However, this is not to say that Smith's analysis is superior to Hume's in every respect. What is missing from the passages I have quoted, as from everything else that Smith wrote on the matter, is any account of the mechanism whereby economic agents are actually induced to send gold abroad. Hume's price specie flow mechanism is not there, though it could easily have been incorporated had Smith argued that the initial excess supply of money would drive domestic market prices above their natural level, and generate a balance of trade deficit and therefore an outflow of gold. It is tempting to defend Smith by noting that many modern economists, and even some of his 19th century successors, argue that commodity arbitrage in world markets prevents discrepancies in relative prices of the type envisaged by Hume, and most 19th century economists, ever arising. They rely instead on a direct real balance effect running from an excess supply of money to the demand for traded goods to produce the effects that Smith was analyzing. that is true enough, but this defence is hard to maintain, because rather than present an alternative account of the transmission mechanism along such lines, Smith simply ignored the question altogether.

A more sustainable defence of Smith's neglect of these matters is that the transmission mechanism in question is needed to deal with short-run phenomena which were not central to his concerns. By this I mean not that the <u>Wealth of Nations</u> mainly deals with the economics of the long run, because as we have already noted that did not prevent him spending much time and effort analysing the distinction between natural and market price when dealing with allocation questions, but rather that Smith's analysis of the effects of an issue of paper money on the balance of payments arose not in the context of a discussion of the balance of payments <u>per se</u>, but as a part of a rather elaborate argument about the beneficial effects that banks and the use of paper money could have upon the level of economic activity. That argument hinged not on demand side considerations such as underlay the work of John Law and a long line of subsequent inflationists, but on supply side considerations of a type analysed in the 1960s literature on the influence of money on economic growth and welfare. These questions are clearly long run in nature and we will now turn to a detailed discussion of what Smith had to say about them.

IV. Money, Wealth and the Productivity of Banking

The notion that money--particularly specie--is in and of itself wealth may have been entertained by some mercantilists, but it was not held by Smith.

There is no position more consistently maintained throughout the Wealth of Nations--in the chapter "Of Money..." as much as anywhere else, than that it is "the annual produce of land and labour [that constitutes] the real revenue of every society". Smith was quite explicit that, although we often value that produce in units of money, it is what is being valued, and not the money itself which constitutes wealth. Nevertheless, his analysis of the productivity of banking is based on a discussion of the relationship between money and capital that has led some commentators to accuse him, falsely as I shall argue,

of confusion about just this matter.

Smith's argument may be summarized as follows. In order to calculate the net income of an individual capitalist, it is necessary to deduct from his gross income whatever he spends both upon maintaining his fixed capital, and upon replenishing his stock of circulating capital, which in turn is

"...composed of..."four parts...money, provisions, materials, and finished work." (P. 220

From the point of view of society, however, the last three categories represent the income which supports the labour force during the period of production, and hence are part of society's net income. Therefore.

"The fixed capital and that part of the circulating capital which consists in money, so far as they affect the revenue of society, bear a very great resemblance to one another." (P. 220)

That part of current output which is devoted to the maintenance of either of them must be deducted from total production in order to arrive at an estimate of what Smith called "Neat [(net)] revenue" of society.

Now, for Smith fixed capital exists to enhance labour productivity and

"Every saving...in the expense of maintaining the fixed capital which does not diminish the productive powers of labour, must increase the fund [of circulating capital] which puts industry into motion, and consequently the annual product of land and labour..." (p. 223)

and he attributed an analogous property to the money stock. He had a clear, though rudimentary notion of the social productivity of money based on the proposition that the existence of a monetary system permitted trade to be carried on more easily than under barter and hence led to a widening of markets. Given the well known limits imposed upon the division of labour by the extent of the market, and given the key role that Smith accorded the division of labour in rendering land and labour more productive, it follows at once that

for him the existence of money enhances the productivity of labour just as does the existence of fixed capital embodied in some piece of machinery. Hence his frequent use of the metaphor of a "great wheel" when talking about money: the water wheel was after all a ubiquitous form of fixed capital equipment in eighteenth century Britain.

For Smith,

"The substitution of paper in the room of gold and silver money, replaces a very expensive instrument of commerce with one much less costly, and sometimes equally convenient. Circulation comes to be carried on by a new wheel, which it costs less both to erect and to maintain than the old one." (P. 223)

Thus the analogy with fixed capital is carried forward yet another step, and the introduction of paper is seen as a form of technical change that releases resources to be transferred to the stock of circulating capital without reducing productivity. However Smith admits that

"the manner in which this operation is performed, and in what manner it tends to increase either the gross or the net revenue of society is not altogether so obvious, and may therefore require some further explication." (P. 223)

The analysis of the manner in which the introduction of convertible bank money leads to an outflow of specie from an open economy, which has already been described above, was explicitly offered as a first step in that very "further explication." The second and final step is quite straightforward, and we can do no better than quote Smith's own account of it.

In short when gold is displaced by paper money it can (not must, however) be used to acquire abroad goods to be added to the wage fund and thus make a permanent contribution to the stock of circulating capital.

What we have here then is not an analysis that confuses money and capital, not an attempt at balance of payments theory inferior to Hume's, but a clear and correct account of the social gains to be had from replacing commodity money with paper, a matter that has more recently been analyzed using the tools of modern monetary economics by for example Harry Johnson (1969). The analysis in question is carried out explicitly in the context of an open economy, and in the process a clear and correct though incomplete statement of the effects of an issue of convertible paper money on the balance of payments is also offered. All this amounts to a major contribution to monetary economics, for there is nothing akin to this analysis to be found in the writing of Hume with whom Smith is so often unfavourably compared as a monetary economist. Although Smith's failure to incorporate the pricespecie flow mechanism into his analysis is certainly regrettable, particularly given the ease with which he could have done so and his failure to develop any alternative, it is hard to see how this omission can be judged to amount to a fatal flaw in his contribution.

V. The Real Bills Fallacy and the Regulation of Banking

We have seen that Smith viewed the social productivity of the monetary system as arising from its contribution to furthering the division of labour, and that for him the introduction of paper money, though it did not make the monetary system itself any more efficient, was nevertheless beneficial to the extent that it allowed the specie embodied in the money stock to be converted into circulating capital. As he put it

"It is not by augmenting the capital of the country, but by rendering a greater part of that capital active and productive than would otherwise be so, that the most judicious operations of banking can increase the industry of the country." (P. 247)

However, this view made Smith an advocate of neither government sponsored banking on the one hand, nor unregulated private banking on the other.

He was clear that whether or not paper money circulated was at the discretion of the public rather than of the government or the bankers, stressing that it was the public's confidence in banks that enabled those liabilities to circulate.

"When the people of any particular country have such confidence in the fortune, probity and prudence of a particular banker as to believe that he is always ready to pay upon demand such of his promissory notes as are likely to be at any time presented to him; those notes come to have the same currency as gold and silver money, from the confidence that such money can at any time be had for them." (P. 224)

On the other hand, he did not expect that the confidence in question would, or should, become absolute. Although the activities of banks would augment

"...the commerce and industry of the country...it must be acknowledged...[that they]...cannot be altogether so secure, when they are..., as it were, suspended upon the Daedalian wings of paper money, as when they travel about on the solid ground of gold and silver." (P. 247)

Smith took this view, in part at least, because he did not trust banks to act in the public interest even when it was, as he saw it, in their own private interest to do so. Experience told him that banks, when unregulated, tended to overissue paper money.

"Had every particular banking company always understood and attended to its own particular interest, the circulation never could have been overstocked with paper money, but every particular banking company has not always understood or attended to its own particular interest, and the circulation has frequently been overstocked with paper money." (P. 232) For this reason, banking needed to be regulated, and Smith displayed considerable impatience with arguments to the contrary based on the grounds that such regulation would be a violation of natural liberty.

"Such regulations may, no doubt, be considered as in some respects a violation of natural liberty. But these exertions of the natural liberty of a few individuals, which might endanger the security of the whole society, are, and ought to be, restrained by the laws of all governments; of the most free as well as the most despotical. The obligations of building party walls, in order to prevent the communication of fire, is a violation of natural liberty, exactly of the same kind with the regulations of the banking trade which I here propose." (P. 250)

The only element in Smith's detailed arguments about these matters that is not defensible is the view that, if only banks would pursue their own self interest, they would not overissue paper money. It is not defensible because it rests upon the Real Bills doctrine which Smith states all too clearly.

"When a bank discounts to a merchant a real bill of exchange drawn by a real creditor upon a real debtor, and which, as soon as it becomes due is really paid by that debtor, it only advances to him a part of the value which he would otherwise be obliged to keep by him unemployed and in ready money for answering occasional demands. The payment of the bill, when it becomes due, replaces to the bank the value of what it had advanced, together with interest. The coffers of the bank, so far as its dealings are confined to such customers, resemble a water pump, from which, though a stream is continually running out, yet another is continually running in, fully equal to that which runs out; so that, without any further care or attention, the pond keeps always equally, or very nearly equally full." (P. 233)

Now as has been widely, though unfortunately by no means universally, understood at least since Henry Thornton's Paper Credit (1802) there are two problems with the real bills doctrine as it is usually propounded. First, depending

upon the number of transactions between merchants involved in bringing goods to market, and the period of credit customarily granted, any number of "real" bills could be created upon the alleged security of the same goods; and second, many proponents of the doctrine say nothing about what determines the price of the goods in question. 6 The second of these criticisms cannot be levelled against Smith's version of the doctrine. As we have already seen, he assumed a paper money convertible into specie so that the price level was tied down by factors exogenous to the operations of banks. Furthermore he maintained that assumption quite explicitly in the discussion from which the last quotation is drawn. However the first element of Thornton's critique of the doctrine may validly be applied to Smith's views. He believed that, if only banks would follow the precepts of the Real Bills doctrine, they would not tend to overissue paper money; observing that they did indeed from time to time overissue he concluded that they could not therefore be following the practises he recommended. We know now that to adhere to the practises implied by the Real Bills doctrine provides no guarantee against overissue, and therefore must conclude that Smith was wrong necessarily to attribute the fact of overissue to banks' neglect of their own self interest. However, this was as far as he carried the error in question. He went on correctly to identify specie convertibility as an overriding check against anything but temporary overissue of bank paper: indeed he attached so much importance to convertibility that he recommended it be made a legal obligation.

According to Smith if the activities of banks were such as to lead to the amount of paper money outsianding being greater than

"the quantity of gold and silver that would have circulated in the country had there been no paper money... the excess of this paper money would immediately have returned...in order to be exchanged for gold and silver." (P. 230)

Thus, such an overissue of paper would not raise prices, but this would only be the case under convertibility.

"...it would be otherwise, indeed, with a paper money consisting in promissory notes, of which the immediate repayment depended, in any respect, either upon the goodwill of those who issued them; or upon a condition which the holder of the notes might not always have it in his power to fulfill; or of which the payment was not eligible till a certain number of years, and which in the meantime bore no interest." (P. 250)

Such a paper currency could indeed depreciate relative both to goods and specie, and Smith's long discussion of various monetary experiments in the North American colonies was mainly addressed to illustrating the proposition that no legislation would be able to prevent it from doing so if it was overissued. Only if bankers were obliged by law to convert their paper into specie on demand at a fixed price could there be a guarantee against that paper's depreciation.

Even when under a legal obligation to maintain convertibility, Smith recognized that individual banks might be mismanaged and, being unable to meet their legal obligations, would fail. In view of this possibility, he further advocated a legal prohibition against the issue of bank notes of low denomination, by which he meant as a practical matter of less than five pounds. Where only large denomination notes were in circulation, he argued that they would in the main be utilized and held by merchants who could be expected to have both the experience and information to be able to protect themselves from losses should a particular bank become or threaten to

become insolvent. However, he also believed that

"Where the issuing of bank notes for...very small sums is allowed..., many mean people are both enabled and encouraged to become bankers.... But the frequent bankruptcies to which such beggarly bankers must be liable, may occasion a very considerable inconveniency, and sometimes even a very great calamity, to many poor people who had received their notes in payment." (P. 249)

The prohibition of the issue of small notes was thus advocated as a device to protect the poor and ill informed-against losses which their own ignorance might lead them to incur, and was not so fundamentally important a matter as the obligation to maintain convertibility. These two steps were all that Smith regarded as desirable as far as the regulation of banking was concerned.

"If bankers are restrained from issuing any circulating bank notes or notes payable to the bearer, for less than a certain sum; and if they are subjected to the obligation of an immediate and unconditional payment of such bank notes as soon as presented, their trade may, with safety to the public be rendered in all other respects perfectly free." (P. 254)

Thus, although there can be no doubt that Smith espoused the Real Bills doctrine, he was not led to argue, as were many later adherents of the fallacy, that the banking system could safely be left to its own devices, even in the absence of specie convertibility. It was not therefore a fundamental component of his analysis of banking policy in the same sense as was his insistence upon the importance of convertibility. We should not allow the fact that later proponents of the fallacy often quoted Smith in their own defence while omitting to mention this latter aspect of his views to distort our picture of what he himself had to say on these issues.

VI. Conclusions

It was suggested at the outset of this essay that Adam Smith deserves more credit as a monetary economist than is usually accorded him. It is to be hoped that the foregoing account of what he had to say about monetary matters will have at least caused the reader to take this suggestion seriously. We have seen that Smith had a quite conventional theory of the determination of the price level in a world of specie money, but that he had much that was correct and penetrating to say about the consequences of the development of banking in such a world.

Smith clearly understood the nature of what we would now call the social saving that arises from substituting paper money for specie, and used a basically correct, though incomplete, extension of Hume's balance of payments analysis to show how those gains would be realized in an open economy. His understanding of what we would now term the productivity of banking did not blind him to the risks inherent in basing a monetary system on paper, and his argument that specie convertibility be a legal obligation stemmed from a clear understanding that such a requirement was the ultimate check on overexpansion by banks. Though he developed the Real Bills doctrine, he was not led by it, as were many of its later exponents to argue that unregulated private banking could be relied on to provide monetary stability regardless of whether bank liabilities were convertible or not. Indeed he explicitly denied this.

All this amounts to a substantial contribution to monetary economics, and though judgements about such things ultimately rest on personal taste, and perhaps also on contemporary fashions in what is and is not regarded as important, I hope that some readers of this essay will agree that Smith's contribution here is substantial enough, despite the errors and imperfections in it that we have noted, to warrant a good deal more praise than is usually bestowed upon it.

FOOTNOTES

See, for example, Lekachman (1959) for the view that Smith confused money and capital. Viner (1937) is well known for having criticised Smith's ignoring the price-specie flow mechanism.

²All references to page numbers in the <u>Wealth of Nations</u> in this paper refer to Volume 1 of the two volume Irwin paperback edition of the Wealth of Nations edited by Mark Blaug.

Indeed it is not until the publication of John Stuart Mill's Principles of Political Economy that we get a clear statement to the effect that the right mathematical analogy for supply and demand is an equation rather than a ratio. See page 448 of the Ashley edition of Mill: "Thus we see that the idea of a ratio, as between demand and supply, is out of place, and has no concern in the matter: the proper mathematical analogy is that of an equation. Demand and supply, the quantity demanded and the quantity supplied, will be made equal."

⁴See Frenkel (1976) for a useful account of the 19th Century origins of the modern monetary approach to balance of payments theory, a survey which nevertheless seems to me to underrate the importance of Adam Smith's contribution.

⁵The relevant analysis is contained in Chapter 4 of Book I of the Wealth of Nations, "Of the Origins and Use of Money."

⁶The first of these criticisms of the Real Bills doctrine is to be found in Thornton (1802), pp. 85 et seq. The second criticism is dealt with in Thornton (1802), pp. 252 et seq.

Thus, it is fair to regard Smith, even in his embracing of the Real Bills doctrine, as a forerunner of the Banking School. However in his insistence on the importance of convertibility he differs radically from the anti-bullionists, not to mention those proponents of the Real Bills doctrine who were, for example, responsible for the Weimar hyperinflation.

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