## 'The folly of particulars': the political economy of the South Sea Bubble

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In 1720 Britain embarked on a project to convert a large part of the public debt into shares in the South Sea Company. Most narratives assume the Company stood to profit from an anticipated increase in the market price of its shares. Though some have noted that this assumption is incorrect, no one has yet tried to find an alternative explanation for the Company's motivation for entering into the project. In this article I argue that the Company had no need to profit directly from the conversion operation and instead saw it as an opportunity to establish dominance in the British banking industry.

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In early 1720 the South Sea Company approached the British parliament with a proposition for a major change to the nation's system of public finance. Those holding long-term public debt would be invited to convert it into newly issued shares in the Company. The government would continue paying out as much interest as before, but to the Company instead of to its present numerous creditors. The Company in turn would pass the cash along, perhaps even to much the same set of people, in the form of dividends on its shares. Parliament eventually accepted the proposal. There followed an almost tenfold increase in the price of South Sea Company shares later that year and a subsequent rapid collapse, almost back to their original level, in the fall.<sup>1</sup>

It is very clear how the government stood to benefit from the project. Depending on how much debt was converted into its stock, the Company promised to make a one-time payment into the Exchequer of as much as £7.6m. The cash would be used to redeem other long-term public debt. The resulting budget surpluses were to be applied to redeeming still more debt, raising annual surpluses further, and so

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on. According to one MP, the scheme would position the nation to retire the whole of the debt within 25 years (Coxe 1798, pp. 181–2); this was for an earlier version that had the Company making a payment of only £3.5m (*Political State*, January 1720, pp. 92–5).

For centuries commentators have thought it was equally clear how the Company would benefit from the arrangement: by a 'profit', they alleged, that it could generate insofar as the market price of its stock exceeded the par value of £,100 per share (see, for instance, [Trenchard] 1720, pp. 14-15; Chancellor 1999, p. 62; and Ferguson 2008, p. 156). By the terms of the statute (6 Geo. I, c. 4), for every £,100 of public debt offered it, the Company would be entitled to issue one new share. But when it came time actually to swap public debt for stock, the Company was free to set upon its stock whatever price it could persuade prospective new shareholders to accept. It was widely expected that the directors would offer a price close to the one prevailing in Exchange Alley, the London market for trading financial assets. Given that the market price was around £130 just before the project was announced, in order to buy up whatever public debt it was offered the Company would need only some fraction of the new shares it had been authorised to issue. Revenues from sales of the remaining stock, so the story went, would constitute a profit out of which could be financed both the large cash payment to the state and healthy future dividends for shareholders. This interpretation also offered contemporaries an easy explanation for the Bubble itself, one that has been repeated in the secondary literature ever since: that Company directors became greedy and manipulated the market price of the stock sharply upward, well beyond the level needed to cover the Exchequer payment and a modest profit for themselves (see, for instance, Anderson 1787, p. 122; Dickson 1967, p. 136; and Chancellor 1999, pp. 73-6).

But over the past few decades several scholars have noted that the Company could not have benefited from the debt-conversion project in the manner indicated (Cowles 1960, p. 93; Murphy 1986, p. 161; Neal 1990, p. 110; Garber 2000, p. 111; Dale 2004, pp. 79–81; Paul 2011, pp. 80–3). Those purchasing 'surplus' stock would have expected to receive the same dividend rate as any other shareholder. So the cash they contributed would not have been available for distribution as profit; it would have needed to be redeployed in some profitable line(s) of business to finance dividends for those buying the additional stock.

Though this finding invalidates the traditional explanation for the Company's decision to pursue the project, Bubble scholars, curiously, have not furnished a replacement for it. In this article I offer such an alternative account. I show that the nature and meaning of the Exchequer payment has been misunderstood and that the Company did not in fact need the scheme to generate a profit, at least not directly. I argue that the principal benefit would come rather from the large new flows of public cash the Company was destined to receive. Since we do not have anything from the personal papers of Company directors to guide us, any interpretation of their aims and methods has to be largely speculative in

nature.<sup>2</sup> My speculations are at least grounded in a careful study of the financial and political context in which the debt-conversion project was designed and offered and of those details that we can observe about its actual execution.

I

The Exchequer payment has generally been interpreted as an exchange of good offices; the government granted the Company the 'privilege' of converting public debt into its stock and the Company returned the favour with a cash payment (see, for instance, Dickson 1967, p. 97; Neal 1990, pp. 98–9; Dale *et al.* 2005, p. 234). The implication is that the Company expected to generate a profit from the conversion operation and was prepared to share some part of this with the government. But I maintain the Exchequer payment was a straightforward corporate concession, the mathematical corollary of an implicit offer on the Company's part to lower the interest rate the government was paying on the public debt.

The idea of reducing the interest rate on public debt was in the air at the time. On a large portion of the debt the interest rate had been lowered from 6 to 5 per cent per annum in 1717 (Dickson 1967, pp. 84–7). At the time some had pushed for the rate to be lowered still further to 4 per cent ([Defoe] 1717, pp. 37ff., 57–9; [Paterson] 1717, pp. 82, 90–1, 97, 116, 144–5)<sup>3</sup> and for the legal maximum on all private debt contracts to be reduced accordingly ([Hutcheson] 1717, p. 16). The Treasury had not dared go so far, contenting itself instead with several measures to fund at 4 per cent about £2.5m of debt for which no long-term provision had yet been made (Dickson 1967, pp. 87–8). The idea of a further reduction in the interest rate, however, had by no means gone away. So for instance one MP, writing some months after the reductions of 1717, went to the trouble of estimating for his peers the impact on the public debt should the legal ceiling be lowered to 4 per cent (Hutcheson 1721, pp. 11–12).<sup>4</sup> By early 1720 the issue had become particularly urgent given that John Law was working in France to lower the interest rate there to 2 per cent per annum.<sup>5</sup> Both on that account and because Law had positioned the crown to pay

<sup>&</sup>lt;sup>2</sup> Anonymous [1722] is often attributed to Theodore Janssen, one of the directors. But this is only a guess and, even if it were correct, the author by his own account had no role in designing or implementing the scheme.

<sup>&</sup>lt;sup>3</sup> The latter work is not attributed to Paterson on ECCO. But in his review of the book in *Political State*, Boyer wrote as though everyone knew Paterson was the author (Mar. 1717, pp. 26off.).

<sup>&</sup>lt;sup>4</sup> Though this passage appears in a work published in 1721, according to its author it was written in Dec. 1717. I can find no sign of its having been published separately at that time.

<sup>&</sup>lt;sup>5</sup> Law had engineered a stock-market bubble around the Mississippi Company in order in part to reduce the general interest rate. He was aiming for a combination of a share price and dividend payout that would give new investors, i.e. those buying shares in secondary markets rather than directly from the Mississippi Company, a rate of return of 2% per annum (Neal 2004, p. 184). Since Mississippi shares were destined to become the sole public asset available for purchase in France, this would naturally have had implications for the general interest rate. British officials were aware of Law's objective. Thus, for instance, in Dec. 1719 Daniel Pulteney (the British representative in Paris) reported back to

off a substantial portion of its debt, British diplomats residing in France were wringing their hands, warning that unless something were done, 'his majesty [George I] cannot long continue the arbiter of Europe' (NA, SP 78/166, 16 October 1719). In Britain in early 1720 there had been talk in the House of Commons of accompanying the South Sea debt-conversion project with another statute for lowering the legal rate of interest in Britain to 4 per cent (Anonymous 1720a, p. 21) and widespread expectation that the interest rate on public debt was about to fall to that same rate (Anonymous 1720c, p. 38).

The debt-conversion project of 1720 was at base an exercise in reducing the government's per-pound debt-servicing costs. This could have been accomplished by lowering the interest rate on the existing principal, by keeping the interest rate constant and increasing the principal, or of course by some combination of the two. In 1716–17, the first approach was taken (3 Geo. I, c. 8 and 9). With both of its major corporate creditors the government negotiated a reduction in the interest rate from 6 to 5 per cent per annum. In this case, the Company's loan was kept at £10m and its annual interest payment lowered to £,500k. In 1720, Treasury and Company chose the second route. That they were aiming for a reduction in the effective interest rate is indicated by the fact that the size of the Exchequer payment was made conditional upon the amount of new public debt that would be acquired by the Company. Technically the payment was calculated in two parts, one fixed and the other varying with the amount of debt converted (6 Geo. I, c. 4). But this was only because the debt was of two basic types. The state had the right to buy back so-called 'redeemable' debt upon demand. As the Company could be certain of its conversion, the fixed portion of the Exchequer payment pertained to this part. 'Irredeemable' debt, by contrast, could be terminated only with the prior permission of the holder. Since no one could know how much would ultimately be offered for conversion, the payment for this part was made variable. Assuming full conversion, with an Exchequer payment of £7.7m atop the £43.4m in long-term loans it would be affording the government and on which it would be receiving interest of f2.1m annually, the Company was in effect offering the public an interest rate of 4.15 per cent per annum. Though the equivalency between interest-rate reduction

his superiors in London that 'the people here will find themselves strangely disappointed when [Law brings the bubble operation to a close and] they [discover] themselves reduced to an interest of 2 p cent, which will very ill answer the extravagant rate of living they now put themselves on' (NA SP 78/166, 11 Dec. 1719). Law's goal had been achieved by the final day of Dec. 1719, when the Company's dividend rate for the coming year was set at 200 livres per share and the market price of Mississippi stock had been stabilised around 10k livres per share. In that same month Law's new national bank, the Banque Royale, was lending to the general public, on security of Company stock, at 2% per annum (Murphy 1997, p. 209). In Mar. 1720 Law issued an edict fixing the legal maximum interest rate on private debt contracts at this same rate (Faure 1977, p. 401; Anonymous 1720e, pp. 1–19). In mid May it was declared that the crown was prepared to lend to its subjects for commercial purposes at the rate of 2% per annum (Buvat 1865, p. 93). According to Pulteney, Law intended in another year to go further still and reduce the general interest rate to 1% per annum (NA, SP 78/166, 10 May 1720).

and principal increase was not explicitly noticed while the conversion project was under way (at least not in the printed record), one contemporary remarked upon it shortly thereafter. The Commons had approved the exercise with an eye to 'a reduction of interest, or, which was the same thing, in consideration of a sum of money to be paid for the use of the publick' (Anonymous 1720d, p. 3).

Once the Exchequer payment is interpreted as the consequence of an implicit reduction in the interest rate on government debt, it becomes much easier to understand why the Bank of England was prepared to make an offer of its own and how the resulting bidding war could generate so quick and sizeable an enlargement of the payments being contemplated. On the usual telling, both institutions would have needed to find some new source of profit from which to finance the payments. The slave trade is the most obvious possibility in the case of the South Sea Company, especially since that trade was then heavily impaired by a war with Spain (Sperling 1962, p. 24). But even in peacetime contemporaries had set the prospects for trade profits quite low; Hutcheson estimated them at one-sixth of Company dividends on their then £,10m capital, or about £,100k per year (1718, p. 2). For the rest it is unclear why a debt-conversion operation should have opened investment opportunities not already available to either corporation. The problem vanishes if we suppose that the offers for an Exchequer payment reflected interest-rate concessions. Their offers could have risen considerably more had either corporation been willing to lower their rates further, perhaps even to 3 per cent as some members of parliament were already proposing. This is presumably why the Company confidently promised to match any other proposal that might be forthcoming (Political State, February 1720, p. 216). Its only real difficulty, though by no means a small one, would have been to find investors willing to supply the additional capital required, given that the rate of return they could expect was lower than what they had been earning for the past few years.

The foregoing interpretation raises an obvious question: why would Treasury, Company and Bank have sought to reduce debt-servicing costs by such indirect means rather than just declaring a simple reduction in the interest rate on the public debt? For they had both taken the latter approach in 1717; and in 1720 proposals from both Bank and Company did include explicit offers to lower the interest rate on the public debt to 4 per cent starting in 1727. I will argue below that the indirect route was chosen because the resulting misdirection was crucial in inducing enthusiasm for converting public debt into Company stock.

Π

If the debt-conversion project at base represented an offer to lower the interest rate being charged on public debt, it follows naturally to ask why Company or Bank would have pursued such an idea in the first place. My thesis is that both organisations believed a reduction in the interest rate on public debt to be imminent and that their proposals were attempts to influence the terms upon which the anticipated reduction might be implemented. Both institutions expected to suffer some loss of interest income on their existing state loans. But both also wanted to use the offer of an interest-rate reduction to secure for themselves the right to manage a much larger portion of the public debt. This objective was driven in turn, I maintain, by the prospect of using the resulting new flows of public specie to support larger issues of paper money.

In this respect too the new system of public finance that Law was erecting in France had set an example for Britain. Law had been trying for some years to use the flow of French public revenues and expenditures to sustain a new supply of credit (Faure 1977; Murphy 1997; Velde 2009). In May 1716, he had obtained a royal charter for a Banque Générale. The new corporation was small and at first completely private in nature. But Law worked very quickly to harness it to the system of French state finance. In April 1717, by a royal decree, the bank's notes were made legal tender for anyone paying their duties or taxes and tax receivers were required to cash them upon demand. In September 1717, tax officials were ordered to keep their accounts, and receive and pay, in Banque notes. In December 1718, the private Banque Générale was transformed into the public Banque Royale. A wellinformed contemporary asserted that with the conversion Law's goal was to 'cause all receipts and outgoings of state revenues to pass through it [the Banque]' and that 'the Banque was destined to receive and pay out all the specie in the kingdom' (Anonymous [ca. 1726], pp. 321, 330). To that end, in 1719, through the auspices of the Compagnie des Indes (a joint-stock financial corporation he had established in 1717), Law acquired control of the two principal public receipt and expenditure mechanisms in France. The Compagnie bought up the General Farms – a privately held contract with the state to collect the nation's single largest tax base, accounting for about a third of total annual public revenues. And it offered the crown a loan of 1.6 billion livres with which to buy back a corresponding amount of public debt – well over half that estimated to exist at the time. Since the loan was to be financed with a massive new issue of Compagnie stock and most investors paid for their stock with public debt rather than in cash, it would amount to a wholesale swap of public debt for private equity. The net effect was therefore to cause the annual outgoing interest payments on a large part of the public debt to be re-routed through the Banque's coffers. This positioned Law to use the Banque to issue large quantities of credit in support of public finance. In October 1719, Thomas Crawfurd (Britain's envoy in Paris) informed James Craggs (Secretary of State for the Southern Department) of a new and 'very bold' French regulation, 'very advantageous for the King'. '[T]he minister of each department is to be ask'd what sum he wants for the current service of the year and is to have the sum he demands advanced immediately at the Banque, for the whole year if he pleases or for less as shall be thought proper' (NA, SP 78/165, 28 October 1719). While ministries might have been charged interest on their Banque loans, the revenue would ultimately have accrued to the state in any case, so that in principle it was now possible to finance state expenses merely by printing money. This is one reason why the quantity of Banque notes in circulation started rising very quickly, reaching 400m livres in

August 1719, 770m at year's end and 2,380m by June 1720 (Du Tot [ca. 1740] 2000, p. 397). It should be noted that the notes of the Banque Royale effectively displaced a private paper currency similarly built on the cash flow generated by public revenues and expenditures – the so-called *billets des fermes* with which private French tax farmers had previously been making many of their loans to the crown (Johnson 2006, pp. 981–2, 985).

In Britain over the previous half-century or so, attempts to forge links between public specie flows and public credit had been few and unsuccessful. With but two exceptions, during this period the Exchequer consistently operated strictly on a cash-only basis; it took in specie with the aim of paying it directly out again as soon as possible. The two exceptions, both abortive projects, were the fiduciary Treasury 'orders' of 1667-71 (Chandaman 1975, pp. 295-300) and the Exchequer bills of 1696-7 (Dickson 1967, pp. 366-73). Both were interest-bearing IOUs assignable by endorsement and designed to circulate on the basis of public confidence in Exchequer cash flow. The former were to be repaid out of earmarked revenues in strict order of original issue. The latter were expected to remain in circulation indefinitely but could be presented to the Exchequer or the state's revenue officers for payment in specie upon demand. Treasury orders eventually failed due to overissue, leading to the Stop of the Exchequer in 1672. The original Exchequer bills never became popular with investors – not surprisingly, since state coffers were virtually empty at the time owing to war-time stringency and the great recoinage of 1696–9; later issues of Exchequer bills circulated instead on the strength of privately supplied stores of specie (Dickson 1967, pp. 373ff.).

Barring these two exceptions, public revenues had supported credit creation only through the mediation of private financiers. Government spending agencies generally could not afford to wait until the taxes assigned to them had actually come in. They needed to borrow in anticipation of these revenues, typically for several months to a year. To accommodate their needs the Exchequer assigned them 'tallies': interestbearing, transferable IOUs payable in order out of specific taxes as they were received into the Exchequer. Public officials generally could not make payment to their suppliers directly in tallies; instead they deposited them with private bankers as security for loans taken in the cash in which alone most suppliers were prepared to accept payment. The bankers in turn were often intermediaries for a broad range of smaller creditors, each of whom was prepared to lend only if they had reasonable confidence that their loans would be repaid in fairly short order - or at least could be repaid if their financial circumstances prohibited simply rolling the loans over. Bankers with guaranteed access to regular infusions of specie had therefore a tremendous advantage in serving as intermediaries for large short-term loans to the state. Before the creation of the Bank of England in 1694, access of this kind was provided by tax-farming contracts and/or public revenue offices such as Receiver General of the customs or excise taxes (Nichols 1987; Clay 1978, pp. 93-9; Chandaman 1975, pp. 33, 72, 247).

The Bank used its central position in the nation's system of public finance to support large new issues of credit. From 1707 to 1713, to help finance Britain's participation in the War of the Spanish Succession (1701-14), the government issued £,5.6m in new Exchequer bills (Dickson 1967, p. 373). The Bank was assigned the task of supporting their circulation by standing ready to exchange them for cash upon demand. To help it furnish this service the Bank was paid a large interest annually. But it is clear that in performing this role the Bank also drew upon its position as banker to the government. In 1711 and 1712, Bank directors repeatedly warned the Treasury Lords that they would not be able to honour their contract to cash all Exchequer bills upon demand, or service further short-term loan requests, unless the Treasury 'should strictly enjoyne all publick officers [i.e. paymasters] whatsoever to keep their cash either in Exchequer bills or with the Bank . . . [and] the receivers of the several taxes ... [to] transact their affairs with the Bank'. They complained that some paymasters and most receivers were keeping their cash with other bankers (NA, T 1/140/4).6 The benefits of public cash flow to the Bank were indicated too by the terms of its 1717 agreement with the Treasury to begin managing payment of  $f_{i,1}$ . Im in state annuities. Since that business had until then been handled by the Exchequer (3 Geo. I, c. 7), this immediately brought the Bank new public cash flows (payable quarterly) of £,552,108 per annum (NA, T 1/225). Though in principle the Bank was required to pay the annuities out again as soon as possible after it received them, it would have benefited by the opportunity to substitute its notes for any specie it received from the Exchequer and to the extent that annuitants decided to leave their payments on deposit and/or manage their money transactions via the Bank's books rather than through cash withdrawals. In return the Bank agreed to accept a one-percentage-point reduction in the interest rate on its long-term public loans, to convert £2m in Exchequer bills into a longterm loan, and to commit to lend the government long-term a further £2.5m (BEA, G4/9, 15 and 28 May 1717). The Bank would have benefited likewise from the interest it earned on its several long-term loans to the state. By the end of 1719 these loans totalled £5.4m and brought it payments from the Exchequer of £,288,751 per annum (NA, T 1/225). The Bank was authorised to collect the cash weekly as it arrived on the relevant tax accounts (3 George I, c. 8).

The original creation of the South Sea Company can be interpreted as an attempt to harness public cash flows to private credit supplies. In the first decade of the new century the Sword Blade Company had tried to make inroads into the Bank's territory: taking deposits and using them as backing for bank notes that were deployed in discounting bills of exchange and lending on securities (Scott [1912] 1968, vol. 3, pp. 436–40; London Gazette, I May 1707; Anonymous [1708]). The Bank fought back, in 1708 obtaining a new statute (6 Anne, c. 22) that declared henceforth no other

<sup>&</sup>lt;sup>6</sup> See also BEA, G<sub>4</sub>/<sub>1</sub>, 19 Apr., 30 Aug. and 11 Oct. 1711; and 6 and 27 Mar. 1712.

<sup>&</sup>lt;sup>7</sup> The specific document is entitled 'An accot. of the publick debts at the Exchequer', dated 23 Nov. 1719.

corporation, and no partnership of more than six persons, could lend for terms shorter than six months. Defoe later commented that the 'defeat they [the Sword Blade Company] met with there sticks so close to them that they reserve the measures of their revenge, not to cool, no not till the charter of the Bank shall expire' (1719, p. 38). In 1711 the Sword Blade group hit upon an ingenious new strategy by which the 1708 legislation might be circumvented. A group of three financiers, including two of the Company's leading officers (director George Caswall and secretary John Blunt), proposed to the Treasury that some £9.5m of Exchequer tallies be converted into an equivalent amount of stock in a new corporation styled the South Sea Company. As the Company's holdings of public debt were to carry interest at 6 per cent, there would be a regular flow of some £,570k per annum of public cash through its coffers. The Sword Blade Company was reorganised as a private partnership of three (Scott [1912] 1968, vol. 3, pp. 440-1; Sperling 1962, p. 6) and assigned to keep the South Sea Company's cash. Since the new Sword Blade Bank had fewer than six partners, it could issue notes payable on demand and use the large new flow of public cash to support their currency. Unfortunately for Blunt and associates the project does not seem to have worked as intended. One indication is that over the 1710s, whenever the Company had need of short-term loans, it borrowed from the Bank of England rather than the Sword Blade Bank. Indeed, in late 1717, in order to obtain access to a standing overdraft facility, the Company even had to agree to keep all of its cash with the Bank and let the Bank collect directly from the Exchequer whatever cash was waiting there weekly for the Company (BL, Add. MS 25494-8).

With the debt-conversion project of 1720 the South Sea Company was endeavouring to direct vast new amounts of public money through its coffers and at the same time deprive the Bank of England of most of its public cash flow. Were it successful in absorbing the whole of the £31m of public debt targeted for conversion, the Company would get access to a further £1.5m or so of public money annually, which it would be entitled under the terms of the authorising statute to collect weekly from the Exchequer as the revenues came in upon the appointed taxes (6 George I, c. 4). Much of this new cash flow would have come at the Bank's expense. Of the debt to be converted, £13.7m represented the capital value of public annuities that since 1717 had been administered by the Bank (Great Britain, Parliament, House of Commons 1803, p. 314). As a result, roughly £650k per annum in public cash flow would be redirected from Bank to Company. More importantly, the Company's payment to the Exchequer would be used to pay off £3.775m in redeemable public debt held by the Bank. Since the £188,751 in annual interest on the loans was collectible weekly at the Exchequer and paid out only twice a year by way of shareholder

This was never explicitly declared in any of the associated statutes or corporate proposals. But the redeemable debts in question were not included in the list specified in the authorising statute as eligible for conversion into Company stock (6 Geo. I, c. 4). And in Mar. 1720 the Commons gave the Bank the requisite one year's notice that they were to be redeemed (Great Britain, Parliament, House of Commons 1803, p. 319).

dividends, this would have been a very significant blow to the corporation. After the conversion was complete, the Bank would retain only £100k per annum of public cash flow – the interest on its original state loans of £1.6m. The project also greatly weakened the Bank's very right to exist, given that its corporate charter would last beyond 1732 only for as long as the government still had loans outstanding from it (7 Anne, c. 7 and 3 Geo. I, c. 8). Later that year the Bank tried to protect its cash-flow position as best it could by arranging, at the first available opening, to convert into Company stock the £300k in redeemable public debt that it held on its own account (BL Add. MS 25499, 13 July 1720).

At least one contemporary was very well aware of the adverse implications for the Bank of England. James Milner, at the time a member of parliament, had considerable experience in public finance, having for many years served as a military remittance contractor for the Treasury and borrowed very large sums from the Bank (see, for instance, NA, T 1/128/2, T 1/130/17, T 1/159/23, and BEA, G4/7, 16 August 1711). In a pamphlet published anonymously before the debt conversion received final legislative approval, he portrayed the parliamentary debate as a struggle between Company and Bank for 'management of the public moneys'. The Bank's aim was to avoid being stripped by mere upstarts of the 'prize of the publick funds' (1720a, p. 6). He complained that allowing a single company to manage the whole of the debt, instead of having Company and Bank share it more or less evenly as he was proposing, would 'in reality transfer the Exchequer into the City' (1720a, p. 21). In a second pamphlet published anonymously after the legislation had passed, Milner portrayed the Company as being overjoyed and the Bank as in mourning. The former would now have an annual revenue stream of £2.1m and the latter one of only £,100k. In fine literary style, he wrote of the Bank being visited by a 'fantom' that announced its 'melancholy doom'; the government would repay Bank loans of £1.775m on 25 March 1721 and a further £2m on 29 Sept. 1721. 'And it's impossible to describe the agony and despair that appeared in all; the under servants made dismal lamentations, and the vaults of gold and silver groaned that they must now change their habitations' (1720c, p. 35). After the project failed, the editor of the Free-Thinker told an entertaining fable to similar effect (cited in Political State, September 1720, p. 175). A statesman acquired a new coach. His old driver Banks was not sure he could drive it safely. So the statesman hired a new driver, South, tempting him with an offer of exorbitant wages. South drove the coach as fast as it would go, eventually crashing and launching his passengers into a slough.

The negotiations in September 1720 between South Sea Company and Bank about a rescue operation for the Company's stock after its price had collapsed further suggest that the debt-conversion project was at base a struggle between the two organisations for access to the flow of public cash (HLRO, HL/PO/JO/10/2/157/7 and *Political State*, September 1720, pp. 186ff.). The Company opened with a proposal for the Bank to circulate some unspecified quantity of South Sea bonds, the Bank being suitably compensated for its costs. The Bank was not keen

and wanted much more of the Company. After a few days of hard bargaining, the Bank agreed to circulate  $\mathcal{L}_3$ m in Company bonds or Bank sealed bills for the Company on two conditions. The Company would keep its cash with the Bank of England instead of with the Sword Blade Bank. And the Bank would no longer have to sell its  $\mathcal{L}_3.775$ m of redeemable debt back to the state; instead it would be allowed to exchange that debt for South Sea stock. In effect this meant that the Bank would keep its existing cash flow and get access to the whole of the new flows associated with the debt-conversion project. Presumably this meant the Bank would also retain its current position as the government's chief credit purveyor.

The circumstantial evidence, therefore, suggests that with the debt-conversion project of 1720 the Company ultimately aimed to supplant the Bank of England and assume the latter's longstanding status as the state's principal lender. There is one piece of eye-witness testimony for this proposition. After the Company's stock price began collapsing in September 1720 and the nation's credit system entered into crisis, the Treasury learned that Company directors had neglected to set aside a specie reserve sufficient to meet the present surge of Exchequer bill holders wanting to have their bills cashed. On I October, Aislabie, Chancellor of the Exchequer, summoned to the Treasury those Company officials who had been appointed (together with a matching number of Exchequer officers) to look after circulating Exchequer bills. A very remarkable minute of the meeting shows how angry Aislabie was with them. Aislabie could not help noting what this signal failure implied about 'their great promises to this Board of supporting publick credit & furnishing money for the current service upon any exigency or demand from the Treasury'. For the cash required in this instance was relatively small (only £,52k) and they had formally contracted with the Treasury to ensure that it would be available if needed (NA, T 29/24A). Since the Company had never before served as the Treasury's lender of first resort, the promises in question must have been made in conjunction with the debt-conversion proposal. The Company would have had considerable difficulty executing this new role on its own, since as a joint-stock corporation it was still prohibited from issuing notes payable in fewer than six months. South Sea directors would have had to work in close cooperation with the three partners of the Sword Blade Bank (one of whom, Jacob Sawbridge, was also a South Sea director at this time) to make its notes effective substitutes for

<sup>&</sup>lt;sup>9</sup> Gilbert Heathcote, a Bank director, was said to have remarked: '[I]f the South-Sea Company be wedded to the Bank, he ought not to be allowed to keep a mistress' (cited in *Political State*, Sep. 1720, p. 187). It is not clear whether in the end the Bank insisted upon this condition. It is not mentioned in the celebrated 'Bank Contract' that Walpole drew up on 23 Sep. as a formal statement of the agreement reached. But one contemporary writer, very well informed about developments during the crisis period, implied it was part of the deal struck and indeed the cause of the run on the Sword Blade Bank a few days later. 'It was but reasonable, in this case, that the Sword-Blade partners, who had been the chief bankers to the South-Sea Company, should cease to be so for the future. It was not fit they should have the profit, while the Bank had the burden of supporting the scheme' (Anonymous 1720b, p. 15).

those of the Bank of England. This would explain why another Sword Blade partner, George Caswall, accompanied Blunt when the debt-conversion project was first proposed to Aislabie (Dickson 1967, p. 95), even though Caswall was not then a South Sea director.

There are two other indications that the South Sea Company planned to take upon itself functions that until 1720 had been exercised by the Bank of England. First, under the terms of the statute that authorised the debt-conversion, Company and Exchequer working together would undertake to circulate Exchequer bills. For much of the past decade this business had been handled by the Bank for a fee of 3 per cent per annum on all the Exchequer bills in circulation, the Treasury funding the additional interest payable to bearer (Clapham 1958, pp. 60-9). As recently as 1719 this had generated a revenue stream of at least £,76,830 per annum for the Bank (5 Geo. I, c. 3). But as of summer 1720, Company and Exchequer were to provide from internal resources the stores of specie needed to meet any demands for payment of principal and interest on Exchequer bills (6 Geo. I, c. 4). The Treasury estimated that £,896,662 in old bills would still be in circulation by summer 1720. New bills for a further firm would be created later that year and loaned to the Company in support of the debt-conversion project (6 Geo. I, c. 10). Treasury and Company estimated that a specie reserve of £,100k would be sufficient to circulate the resulting total. The two organisations arranged to contribute to the specie reserve, and cover the modest interest cost of the bills (a mere 1.5 per cent per annum), in the proportion respectively of old to new bills (BL Add. MS 25499, 4 June and 7 July 1720). This was a significant departure from past practice. Instead of being handsomely paid to circulate Exchequer bills, as the Bank had been, the Company was expected to contribute its share of the costs free of charge. The arrangement makes sense on the principle that the specie stores from which the Company would obtain the needed resources were ultimately being provided to it from flows of public cash – so that the government ought not to have to pay for it twice. The Bank for one was not happy with the new arrangement. Its solicitors were instructed to investigate the legality of the Treasury authorising new issues of Exchequer bills without the Bank's prior approval (BEA, G4/11, 14 April 1720).

Second, the South Sea Company arranged to introduce large new quantities of its bonds into circulation, laying the groundwork for a push to displace Bank notes from their position as the nation's premier fiduciary currency. To those who had committed to sell the Company their irredeemable debt the directors offered about 80 per cent of the purchase price in stock and the rest mostly in bonds. Given the payment terms (set out in the *London Gazette* for 17 May and 9 August 1720) and the specific amounts of irredeemable debt that had been offered for conversion (HLRO, HL/PO/JO/10/2/157a), this amounted to a commitment to issue about £3m in new bonds. The Company did in fact issue exactly that amount later in

<sup>&</sup>lt;sup>10</sup> I estimate that the Company would have had to pay out £3,030,452 in bonds and cash. Scott ([1912] 1968, vol. 3, pp. 354−9) derived a very similar estimate.

the year (BL, Add. MS 25580). 11 This represented a very significant increase over the roughly £,680k of South Sea bonds in circulation at the end of 1719 (HLRO, HL/ PO/JO/10/2/157b). There was no obvious reason for the directors to pay the annuitants in bonds rather than stock. 12 Narrowly considered, such a move held some considerable disadvantages for the Company. South Sea bonds often remained in circulation past their original due dates, but carried the right to be cashed in at sixmonth intervals (BL, Add. MS 25494-9). They could therefore occasion a liquidity crunch in times of crisis. And while in years of low cash flow the Company could withhold or reduce payment of stock dividends, interest payments on its bonds were obligatory. The decision to issue a large quantity of bonds makes sense, however, if the Company hoped in the near future that they would become a means of payment integral to the nation's system of public finance. With access to large and regular flows of public specie, it would have had good prospect for getting the bonds to function like Exchequer bills. It may have hoped that bonds and Exchequer bills alike, like Bank notes, would remain in circulation even if the interest rate on them were reduced to zero. Indeed, though at the start of 1720 Exchequer bills still bore a modest interest rate of 1.5 per cent, the Company had received parliament's permission to start issuing Exchequer bills that paid no interest at all (6 George I, c. 10). Though Company bonds were not so convenient a monetary medium as Exchequer bills (by the statute of 1708 they could not be cashed for a minimum of six months from date of issue), this could have been compensated for to the extent that the Sword Blade Bank was willing to accept them on deposit and issue its own notes against such deposits. The bonds' ready circulation would

Scott thought that the Company arranged to pay its new shareholders in bonds only because it wanted to issue stock in multiples of £25 (par value) and bonds and cash were needed to cover the odd sums remaining ([1912] 1968, vol. 3, p. 309). But the Company could easily have offered more in stock and still kept to nice round sums. For instance, for every £100 of so-called 'long annuities' it offered £700 in shares (par value, but in the market worth £2625) and bonds and cash for a further £575. Yet the total purchase price of £3200 could have been met with £850 in shares (par value, with a market value of £3187.5) and only £12.5 in bonds and cash.

Bonds totalling £3m were issued between 23 Aug. and 21 Oct. It is clear they were issued to pay the Company's new shareholders because they bear the appropriate issue and maturity dates. The statute authorising the debt-conversion project (6 Geo. I, c. 4) directed that the Company begin receiving the annuities for (and thus be obligated to start paying dividends on) its new stock from the quarterly feast day immediately preceding the dates upon which a given amount of public debt was transferred to them. The Company acquired subscriptions of irredeemable debt in two stages: a relatively large part in Apr. 1720 and a smaller component in August. It would thus have been obligated to issue stock and pay out bonds for these subscriptions from 26 Mar. and 25 Jun. respectively. The directors ordered bonds to be created with these issue dates, bearing interest at 4% and payable in two years (BL, Add. MS 25499, 19 May and 12 Aug. 1720). From payment terms and subscription data I estimate that for the two instalments of debt the Company would have had to pay out £2.587 and £0.444m in bonds and cash respectively. The actual amounts of bonds created with these two issue dates were £2.6 and £0.4m respectively. The maturity dates are as expected for the March issues, though the June bonds were made payable in one instead of two years as ordered.

also have been aided if the Exchequer were prepared to accept them in payment of taxes and loans. It is instructive that later in the year Caswall asked the Treasury Lords for exactly this, asserting that it would enable the Company's bonds to circulate without interest (BL, Add. MS 61604). The more the Company could reduce the interest rate on its bonds, the more it could cover of the annual cost of the new capital needed to raise the Exchequer payment. This would clear room to keep its shareholder dividend rate as close as possible to the current level of 5 per cent per annum. It is probably no coincidence that the size of the Exchequer payment originally proposed, £3.5m (*Political State*, January 1720, p. 94), was roughly the same as the total quantity of South Sea bonds that would have been in circulation upon completion of the project.

In parliament's post-Bubble reconstruction of Britain's system of public finance, not finalised until 1722, the grand vision of a major new monetary role for the South Sea Company was quietly abandoned. Instead, the credit potential associated with public revenue and expenditure flows was left to be captured principally by the Bank and a series of smaller private lenders. On the revenue-collection side, given substantial delays between local collection of taxes and their remittance to London, it was not uncommon for tax collectors and receivers to become partners in country banks. Even with respect to excise taxes, handled by salaried officials who were expected to remit their funds with all possible dispatch, London bankers long 'continued to draw sustenance from public monies' (Presnell 1953, p. 382). On the expenditure side, the Bank emerged from the Bubble's collapse with an enhanced cash-flow position; it was allowed to acquire from the Company enough public debt to add £200k per annum to its annual receipts from the Exchequer (Dickson 1967, pp. 178–80).

III

In sum, the South Sea Company did not need share-price increases either to finance or to benefit from the debt-conversion project of 1720. Two questions remain. Why did the Company not declare up front that the project amounted to an interest-rate reduction? And might it have had other incentives to engineer the stock market bubble of that year?

13 Specifically see an untitled enclosure dated 23 Nov. 1720. Though this document was not signed, I attribute it to Caswall on the following grounds. Also to be found in this set of papers was a letter signed by him, undated but clearly pertaining to the period shortly after the Bubble had collapsed. In the letter Caswall refers to an enclosure in which he gives his thoughts upon a proposal from the Bank of England for how to rescue the debt-conversion project – a plan that Caswall complained was designed mostly for the Bank's advantage. The Bank's proposal is almost certainly another document in the set, one entitled 'Some thoughts humbly proposed for the relief of the proprietors of S. Sea stock & c.'. The piece I am attributing to Caswall begins with a sentence that echoes the first sentence of the Bank memorandum but then outlines a plan that would have been much more advantageous to the Company.

As for the first question, at least two factors were at work. First, an explicit declaration could only have increased the cost to the Company of buying out the annuitants. The distinction between redeemable and irredeemable debt turned, at a superficial level, upon whether government had the right to buy back the debt upon demand. But more importantly the former kind of debt took the form of interestonly payments (in theory into perpetuity) upon a clearly defined and constant principal, while the latter consisted of term annuities that amounted to blended principal-and-interest payments upon some original loan. If irredeemable debt could not be bought back upon demand, this was in large part because it bore no explicit principal value, and repurchase would therefore require a prior agreement between state and annuitant on a purchase price. There was substantial disagreement among contemporaries as to what this price should be. During a parliamentary debate on the subject a few years earlier, some hardliners suggested it should be the value of the original loan or even that amount less interest and principal payments made in the interim. But annuitants themselves insisted upon having the present discounted value of the annuities at current market interest rates ([Paterson] 1717, passim). 14 Since the latter view seemed more likely to prevail, the irredeemable debt represented a large political problem for the government. Early in the reign of George I, market prices of state annuities had risen very considerably after the general interest rate declined from 6 to 5 per cent. For instance, annuities issued in 1710 for a term of 32 years had risen from 10.4 to 14 years' purchase between the start of 1714 and the end of 1716 (Course of the Exchange). (At this time annuity prices were quoted as multiples of the annuity payment – hence the term years' purchase.) As early as 1717 the administration had hoped to reduce interest rates on public debt still further to 4 per cent. Had they done so the principal value of the irredeemable debt would have risen yet again (Hutcheson 1721, pp. 11-12), forcing landowners to dig still deeper into their pockets for the sake of 'monied men' who received their annuities tax-free. The South Sea Company's proposal provided a way out of this morass. 15 In determining the quantity of new public debt with which it would be credited by the state for any annuities offered up in exchange for South Sea stock, the Company agreed to use the market prices that were current when the project was first broached with the Treasury (November 1719). Since the statute stipulated that the Company had to offer the annuitants terms that would bring them into the exchange of their own free will, the cost of any subsequent increases in the market price of irredeemable debt would have to be borne by the Company. Since annuities naturally rise in

The 'Wednesday Club', of whose debates this book is ostensibly a record, was purely fictional. But the positions reported in Club debates I nevertheless take to be representative of the range of contemporary attitudes.

Thus Aislabie, speaking to the Lords in defence of his own conduct during the Bubble, remarked that 'the scheme was adapted to the notions and opinions of those gentlemen who for two sessions before had oppos'd all measures for reducing the interest of the publick debts, 'till the long annuities were made redeemable' (Aislabie 1721, p. 9).

value when interest rates decline, the Company therefore had an incentive to conceal the fact that the project included an interest-rate reduction.

Second, had the project been marketed in a perfectly straightforward manner, it could not have succeeded. At base it called for the interest presently being paid out on £,31.7m in public debt (most of it at a rate, imputed or actual, of 5 per cent per annum) to be distributed by way of Company dividends rather than via quarterly payments from the Exchequer, and for an additional £,7.7m to be raised and contributed to the Exchequer without any interest charge. Such a project would have promised investors a rate of return of only about 4 per cent per annum on average - hardly attractive given that they were currently earning about a full percentage point more than that. And for some the expected rate of return would have been lower still. The owners of irredeemable debt would have done relatively well. They would have benefited from a significant increase in the liquidity of their portfolios; 16 and they could have hoped to use their legal right to refuse conversion to extract a higher proportion of the total issue of new shares. As it actually turned out, they did not even have to bargain for the latter; the Company voluntarily offered them prices better than those prevailing in the market and the latter climbed significantly during 1720 (Course of the Exchange). Those holding any part of the large block of Company stock created before 1720 also stood to do well by the project. These 'old proprietors', as they were called, would share in all the new revenues accruing to the Company. But as they had bought in at relatively low share prices, any rise in market prices that occurred before new public debt was converted into South Sea stock would increase their share of the dividend pie at the expense of new investors. So had the project been carried out even at the modest prices prevailing in early February 1720, those converting redeemable debt or buying shares for cash would have ended up with rates of return below the average of 4 per cent per annum. 17

I will ignore the Company's trading operations and existing bond liabilities (both were relatively minor and would have offset one another) and its operating costs (it received management fees from the Treasury to cover much of this). I proceed by supposing that the Company paid for public debt with new shares (partial payment in bonds at 4% would not have changed the basic outcome much) and that it redistributed to shareholders the whole of the interest received annually from the government. Before 1720 the Company had issued 117,468 shares and was receiving

Contemporaries complained that the market for term annuities was very limited, causing their market values to decline very rapidly with even modest surges in the quantities being offered for sale ([Paterson] 1717, pp. 122–3, 133). And the procedures for transferring them were cumbersome and antiquated. Corporate shares were far easier to transfer and the market for them much deeper. Neal attributes entirely to 'advantages of liquidity' the willingness of investors in the Company's early years to accept a rate of return on South Sea stock that was half that available on the public debt it had replaced (1990, pp. 91–2). But the liquidity premium in 1720 on South Sea stock over public annuities was surely much lower. The naval bills the Company had taken into its stock in the early 1710s were nominally short-term instruments that were difficult to sell because repayment dates were uncertain and distant and interest payments were not always timely (Dickson 1967, pp. 403–4, 69–70). The annuities the Company was trying to bring into its stock in the 1720s were long-term debts with no repayment date and dependable interest streams.

It was therefore necessary for Company and Treasury to resort to misdirection. No mention was made of an interest-rate reduction. Instead, the payment to the Exchequer was represented to the general public as the Company's generous offer to share with the state some part of the benefits that would accrue to it from the conversion operation. It was given out that the profits needed to fund the payment were to flow from the gap between the par and market prices of South Sea stock and sales of the stock thereby made 'surplus'. The common run of state creditor, unlikely to have thought the whole thing carefully through, might well have been taken in by these fictions. Certainly Hutcheson was unable to shift general public opinion to the contrary view despite repeatedly publishing detailed calculations showing that those converting were sure to lose from the operation (see for instance 1720a–d). But even if they knew better or at least had their doubts, state creditors may have been persuaded to join in the exercise anyway – as long as they expected others to believe the story and so share prices to rise. The resulting prospect for capital gains could have made conversion worth their while.

Company officials and any government officials or parliamentarians in the know could have justified the ruse to themselves on the grounds that it was essential for Britain to keep pace with recent rapid declines in the French national debt. Their consciences would also have been eased by the expectation that, when the dust had settled, investors would be no worse off than if they had voluntarily chosen to accept a reduction in the interest rate on their holdings of public debt to 4 per cent per annum. This attitude was perhaps best captured in a letter written in May 1720 by Archbishop William King in Dublin to MP Robert Molesworth in London:

I send you the queries about the South Sea, but would not on any account have it known that I am concerned in it, for I think, if the debts of the nation may be paid by the folly of particulars . . . it will be very well for the publick, and I know no obligation on me to hinder it. Perhaps what would be spent this way would be spent on gaming or on luxury,

£,587,342 in interest per year from the state. The authorising statute identified as eligible for conversion £,666,821 and £,127,260 in long and short annuities, on which the state set official prices of 20 and 14 years' purchase respectively. So with a further £11,779,669 and £4,766,821 in redeemable debt bearing interest at 5% and 4% per annum respectively, a total of £31,664,553 of public debt was eligible for conversion. By the terms of the statute, were all of it converted the Company would have received £1,535,559 more in interest annually from the government and owed the Exchequer a one-time payment of £7,729,674. Assuming it had paid market prices of 24 and 15 years' purchase for long and short annuities respectively, and with South Sea stock priced at £,135, the Company could have bought out the annuitants for 132,686 shares. Had it paid owners of redeemable debt the same 5% premium actually offered during the summer, a further 128,695 shares would have sufficed to finance that debt. Finally, the directors would have had to sell another 57,257 shares to raise the Exchequer payment. Aggregate annual rates of return can be estimated for the four types of shareholder (old proprietors and those buying new shares with irredeemable debt, redeemable debt, and cash respectively) by dividing their shares of the total dividend pool by the values of their pre-conversion assets. Calculating the latter using the market prices prevailing in early Nov. 1719 (namely of £,116 per Company share and 20 and 14 years' purchase for long and short annuities), the rates work out to 4.2%, 4.3%, 3.8% and 3.6% respectively.

and I am of opinion that most that go into the matter are well aware it will not [succeed], but hope to sell before the price fall. (Cited in Scott [1912] 1968, vol. 1, p. 424)

The lawyer Sir John Meres, writing in early February in defence of parliament's decision to head down this policy path, evinced a similar dilemma. On the one hand, he tried to persuade his readers that swapping debt for stock would be good for them because they would earn more in dividends than they were currently getting in interest on their annuities (1720, p. 18). On the other hand, he tried very hard to dissuade them from speculating in the venture. He cautioned all those who were thinking of getting involved in options trading, especially in contracts for future delivery of stock they did not already own.

[G]reat mischief hath often befallen those who have used these ways in other stocks but certainly it will be found more dangerous and fatal in this stock of the South-Sea Company . . . The enlarging the South-Sea capital and the consequences thereof as to the ministry and the state is a production worthy of the genius of Great Britain; but as to men of mean estate it is *monstrum horrendum*. (1720, p. 20)

The real problems with the project came not from its core design but rather from the ensuing sharp climb in share prices. For this ensured that a speculative fever spread far into the middling ranks of British society and greatly magnified the post-crash losses.

It is very unlikely the Company's directors deliberately engineered the stock market bubble of that year. Admittedly they needed the general public to believe that the price of South Sea stock was about to climb, for reasons explored above. But for this purpose only the expectation of future price increases was required. Past a certain point, actual price increases would have made the directors' lives more difficult. First, any given price increase would have made it harder for investors to believe that further increases were yet to come, and so more difficult for the Company to persuade owners of public debt that capital gains were still to be had by converting into South Sea stock. Second, as prices rose so did the probability that the market might suffer a sharp drop. If this happened before substantial portions of the debt had been converted, and if the decline could not be reversed or at least kept from snowballing, the project would have utterly failed. Already in mid February, when prices were still relatively low, George Middleton, a London banker serving as the agent of John Law and his brother William, wrote to Paris about his worries in this regard. He feared that if prices rose any higher, hostile foreigners would be able to induce a stock-market crash at will (cited in Neal 1994, pp. 36-7). In late March, as the price of South Sea stock fluctuated between £,300 and £,350, Pulteney wrote from Paris to Secretary of State Craggs with similar concerns.

Mr Law speaking last night about the rise of our stocks said we could not stand it six weeks & that we are at the mercy of three of four persons in this city... You may depend on it that Mr Law's design is to make such a strong and sudden push on our stocks as we may not be able to stand. (NA, SP 78/166, 10 and 11 April 1720)

The directors expressed the same worry. On 21 April, they explained to a general meeting of shareholders that in the coming months they planned to lend money on security of South Sea stock because 'attempts may be made to depreciate the stock at the times of the execution of the Act' (BL, Add. MS 25499, 21 April 1720). Finally, the Company had to worry about the long-term sustainability of its share price. Should that price decline very significantly in the years immediately following the conversion, the directors were sure to be pilloried as swindlers. But the high prices of summer 1720 made this inevitable. They significantly reduced the rate of return that could have been earned by those who paid cash for South Sea stock and ended up (perhaps unwillingly) holding the latter asset in their portfolio. For higher prices both increased the market value of irredeemable debt (transferring more of the dividend pie to owners of that type of asset) and reduced the number of new shares being issued (diverting a larger portion of future corporate revenues to old at the expense of new proprietors). Milner thought that with a total capital over £,40m and an annual revenue exceeding £,2m, the Company 'would have had such a command of the cash of the nation as must have sunk interest to two and a half or three per cent' (1720b, p. 32). Had that happened, the Company should have been able to sustain longer-term a share price between £,250 and £,350. 18 But it would have been foolish to aim for the price of almost £,1000 observed during summer 1720. For post-conversion this would have resulted in dividend rates well below 2.5 per cent, causing investors to move out of South Sea stock and share prices to fall accordingly.

On this reading, the directors were forced into a very difficult choice by the sharp and unanticipated market price increases of mid 1720: either let the project fail or carry on with the misdirection. They chose the latter course, presenting each new price increase to the general public as an opportunity for still more profit. Their intent was not to swindle anyone but rather to complete the debt conversion and deal at some later date with the adverse consequences to new shareholders of having bought in at very high prices. Once investors were locked into contracts to exchange their government debt for South Sea stock, the directors could have afforded to let market share prices decline to levels that might prove sustainable in the longer term and then renegotiated the conversion contracts to match – as indeed they did in September, proffering stock at £400 per share to subscribers

To obtain this result I used the assumptions of the previous note and determined the varying number of shares that would have to be paid to each investor group at any given market price. I assumed the years' purchase prices of irredeemable debt would vary with the market price of South Sea stock as per the best-fit relationships for the period Jan. to Aug. 1720 (using the values reported in *Course of the Exchange* and converting forward to spot values as in Shea 2007). For long and short annuity prices the resulting functions are 7.0595 \* ln(*share price*) – 13.227 and 0.9616 \* ln(*share price*) + 9.7494 respectively. Rates of return were obtained by dividing the total interest revenue from the government by the total number of shares issued at each market price. On this simplified model, at prices of £250 and £350 those buying shares with cash would have earned annual rates of return of 2.92% and 2.47% respectively.

who had earlier agreed to pay as much as £1000 for it. Had market prices stabilised at £400, new shareholders would have been disappointed of their hopes for large gains but unlikely to complain of having been cheated by the directors.

But the bubble continued to unwind, leaving the directors to face the wrath of ruined investors. Opposition politicians used the occasion to try to dislodge the current administration. The thesis that the directors had deliberately engineered the price increases of that year proved far too convenient in the ensuing parliamentary investigation. Nor could Company or Treasury officials, having from the outset based the whole scheme on a ruse, come clean and say what had really happened. So the story came to be about greedy directors and, by dint of sheer repetition, survived in that form at least to the present day.

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