DOI: 10.1111/ehr.13256

THE ECONOMIC HISTORY REVIEW

ORIGINAL ARTICLE

The anatomy of a bubble company: The London Assurance in 1720

Graeme Acheson[1] | **Michael Aldous**[2] | **William Quinn**[2]

[1]Strathclyde Business School, University of Strathclyde

[2]Queen's Management School, Queen's University Belfast

Correspondence
William Quinn
Email: w.quinn@qub.ac.uk

Funding information
British Academy, Grant/Award Number: SG090281

Abstract

The London Assurance Company (LA), which incorporated during the bubble of 1720, experienced more dramatic price movements in its shares than the South Sea Company. This paper examines how incorporating during the bubble affected its long run performance. We show that the bubble in the Company's share price was partly attributable to changes in market structure during the share issuance process. As a result of the bubble, the Company's original subscribers, who had been curated for expertise and political connections, overwhelmingly exited during 1720 and were replaced by unsuccessful speculators. Analysis of LA shareholder behaviour up to 1737 suggests that this loss of shareholder expertise had detrimental consequences for the Company's performance. These results demonstrate how a bubble in the shares of a newly created company can lead to an exodus of value-adding investors, damaging the company's long-term prospects.

KEYWORDS
British financial history, financial bubbles, financial markets, South Sea Bubble, 1720

Few years in British economic history have attracted more attention than 1720. The dramatic events of the South Sea Bubble resulted in a change of government, significantly reduced the public debt, and set the course of British financial development for over a century. Previous

This is an open access article under the terms of the Creative Commons Attribution License, which permits use, distribution and reproduction in any medium, provided the original work is properly cited.
© 2023 The Authors. The *Economic History Review* published by John Wiley & Sons Ltd on behalf of Economic History Society.

research has studied its political causes and consequences, economic effects, and regulatory consequences.[1]

The most common historical narrative of the bubble in Britain centres on the South Sea Company's debt-to-equity conversion scheme. In this narrative, the British government in December 1719 was concerned about the high level of public debt, particularly given the possibility of John Law's Mississippi scheme significantly reducing borrowing costs for France. The South Sea Company presented a solution in which outstanding debt would be traded for shares in the company, and the government would then pay a reduced rate of interest on this debt to the company. To make this trade appealing to debt holders, the South Sea directors tried to create the expectation that the company's share price would rise, hoping that debt holders would be tempted by the promise of captain gains.[2] This narrative broadly views the bubble in shares of other companies as a spillover effect from the efforts made by South Sea directors to encourage speculation. The evidence for the centrality of the South Sea Company largely comes from its dominant position in news media, parliamentary discussions, and other prominent cultural sources, such as the writings of Daniel Defoe.

This narrative has been challenged by Frehen et al., who argue that the debt-to-equity conversion scheme was the less significant of two factors driving the bubble.[3] They instead emphasize the role of innovation in the insurance industry, arguing that investors were responding to the uncertain potential of what was essentially a new financial technology. This counter-hypothesis rests on four pieces of evidence. Firstly, the two British insurance firms, London Assurance (LA) and Royal Exchange Assurance (REA), experienced significantly larger price movements than any other listed company, including the South Sea Company. Secondly, the price dynamics are similar to those identified by Pástor and Veronesi as typical of a technology bubble.[4] Thirdly, a factor analysis of stock index returns identifies two factors driving stock prices, one of which is heavily weighted on the two insurance firms. Finally, a principal components analysis on the correlation matrix of London stock returns finds that the second component is dominated by the two insurance companies.[5]

This paper examines the role of insurance companies in the bubble by examining new data on one of them in detail: the LA Company. Unlike the South Sea Company, the insurance companies were formed during the bubble, so the LA Company allows us to examine how the drawn-out incorporation process might have affected its share price during 1720. Furthermore, the insurance companies were the only two major newly incorporated companies to survive beyond 1720, and the LA Company kept detailed records of shareholder identities. This allows us to examine how undergoing a drawn-out incorporation process in the midst of a major bubble affected the Company's ownership in the long term.

We find that the dramatic rise in the price of LA shares during 1720 occurred entirely when investors were trading subscription receipts, commonly known as 'scrip', rather than the shares themselves. This affected price dynamics for four reasons. First, scrip was a superior instrument of speculation, because the implicit ability to default placed a floor on losses.[6] Second, an individual

[1] See, for example, Braggion et al., 'Credit provision'; Dickson, *The financial revolution*; Harris, 'The Bubble Act'; idem, 'Political economy'; Hoppit, 'The myths'; 'Kleer, 'Folly of particulars'; idem, 'Riding a wave'; Paul, *The South Sea bubble*.

[2] Dickson, *The financial revolution*; Kleer, 'Folly of particulars'; Quinn and Turner, *Boom and bust*.

[3] Frehen, Goetzmann and Rouwenhorst, 'New evidence'.

[4] Pástor and Veronesi, 'Technological revolutions'.

[5] As is typical in principal components analysis on share prices, the first component is close to an equally weighed index.

[6] Shea, 'Financial market analysis'; Temin and Voth, 'Riding'.

14680289, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/ehr.13256 by NHS Education for Scotland NES, Edinburgh Central Office, Wiley Online Library on [24/08/2023]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

receipt could not be split, making it impossible for the majority of investors to partially cash out. Third, during the period in which the scrip was recalled and shares issued, the quantity of shares that could be traded was dramatically reduced. Finally, the process of transitioning from scrip to shares altered shareholder incentives in ways that would likely have affected their decision on whether to hold or sell.

While the second-largest daily fall in the company's share price during the crash can be plausibly associated with news about fundamentals, the largest fall and the third-largest fall were both associated with the transition from scrip to shares. The considerable effects of market structure and liquidity on the LA share price suggest that the covariance between the price of the two insurance firms and the overall stock market, which has been identified by Frehen et al., might not necessarily be due to the impact of insurance as a financial technology.[7]

We then investigate how the shareholder base changed during the bubble to determine which investors exited. We find that members of the original subscription list, which had been carefully curated for insurance expertise and political connections, overwhelmingly sold their shares for a profit during the bubble. Of the 463 investors on the original list in December 1719, less than 20 per cent held scrip in August, and logit regressions indicate that remaining investors who had not left were more likely to sell or partially cash out when controlling for other characteristics in September 1720. A comparison with shareholder attrition in the Bank of England (BoE) following its incorporation in 1694 suggests that this level of turnover was highly abnormal, and likely a response to the opportunity presented by the bubble for significant short-term profits.

Finally, we consider how the bubble affected the ownership, governance, and performance of the LA Company in the long run. Previous literature has noted that the joint-stock marine insurance companies underperformed relative to private firms, a failing which has been attributed to a combination of information asymmetries and corporate governance challenges.[8] We examine a third possibility: that the price dynamics of 1720 transformed the LA Company's ownership base to the detriment of its long-run performance.

To evaluate this possibility, we use shareholder records to trace the investment horizons of LA Company's shareholders into the middle of the century. We find that the bubble gave insiders the opportunity to cash out at a considerable profit before the company had even begun to operate, and the vast majority did so, resulting in a loss of expertise in the shareholder base. The unsuccessful speculators that joined during the bubble were then gradually replaced by passive investors, many of whom held their shares until death. The loss of expertise, combined with the loss of market discipline associated with extreme shareholder passivity in later years, limited the capacity and incentives for the company's directors to respond to the intense competition of the marine insurance industry. This may partly explain the company's long-term underperformance.

I | THE SOUTH SEA BUBBLE AND THE FOUNDATION OF THE LONDON ASSURANCE COMPANY

In February 1720, the South Sea Company came to an agreement with the government, allowing them to redeem outstanding government debt not already held by that company, the Bank of England, or the East India Company (EIC). They subsequently arranged a series of ambitious

[7] Frehen et al., 'New evidence'.

[8] Aldous and Condorelli, 'An incomplete revolution'; Kingston, 'Marine insurance'; Pearson and Doe, 'Organizational choice'.

14680289, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/ehr.13256 by NHS Education for Scotland NES, Edinburgh Central Office, Wiley Online Library on [24/08/2023]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

subscription issues at which government debt holders could exchange their debt for South Sea stock.[9] Fundamentals suggested that this was a poor deal for debt holders, but the South Sea Company encouraged uptake by generating the expectation that its stock price would rise, allowing debt holders who executed the trade to benefit from short-term capital gains.[10] As Kleer shows, this was much more effective than anticipated, leading to substantial rises in South Sea share prices that proved detrimental to the directors' goals.[11] Their efforts also indirectly encouraged speculation in the shares of other companies, which the Bubble Act of June 1720 sought to curtail.[12]

While the South Sea Company provided a focal point for stock trading and speculation, the market was already becoming increasingly active prior to the subscriptions. In February 1720, a parliamentary committee was convened to examine the growing number of subscriptions launched by ventures seeking incorporation. This committee identified a number of serious ventures that had already solicited funds from prospective shareholders, particularly in the insurance and fisheries industries. However, many others were seen as opportunistic or fraudulent enterprises, pushed by promoters looking to take advantage of the growing market.[13]

Amongst this group of ventures seeking incorporation were two marine insurance companies. Interest in joint-stock marine insurance companies was widespread across Northern Europe in 1720, and the idea of a large incorporated joint-stock insurance company had support amongst the business community in London at that time. A number of petitions associated with prominent Lords and the mercantile community had appeared during the 1710s.[14] A subsequent parliamentary committee noted that the corporate form in the marine insurance sector was an innovation due to its capacity to increase levels of capital. In turn, this capital would enable the corporations to lower the costs of insurance, reduce inefficiencies by enabling merchants to insure whole vessels and cargoes through a single entity, and improve the speed of settlements and disputes, rather than having to deal with multiple private underwriters. [15] Supporters and detractors both believed that the corporations would rapidly come to dominate the industry.[16]

It is not clear that combining insurance with the joint-stock company form, both of which were already common in 1720, objectively represented a major technological innovation. However, as Frehen et al. note, this marked a break in the institutional equilibrium of the industry.[17] Contemporary discussion indicates that investors believed there was a degree of novelty provided by the use of incorporation to adapt business models, and that this would improve their future prospects.[18] These developments shaped investor expectations, and this was reflected in the level of activity in their shares.

One of the two successful insurance petitions can be traced to September 1719, when Sir John Lambert, an established city merchant, invited Stephen Ram, a goldsmith of Lombard Street, to

[9] Carlos and Neal, 'The micro-foundations', p. 501.

[10] Dickson, *The financial revolution.*

[11] Kleer, 'Riding a wave'.

[12] Harris, 'The Bubble Act'.

[13] 6 Geo 1 April 22–27, p. 351.

[14] Raynes, *A history*, pp. 96–7.

[15] Metropolitan Archive, London. LMA CLC/B/192/MS08760, 'Special report from the committee', p. 30. Case Billingsley (from the Royal Exchange Assurance syndicate).

[16] Metropolitan Archive, London. LMA CLC/B/192/MS08760, p. 21.

[17] Frehen et al., 'New evidence', p. 586.

[18] LMA CLC/B/192/MS08760 Summary of the petitions by Edward Northey, p. 26.

14680289, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/ehr.13256 by NHS Education for Scotland NES, Edinburgh Central Office, Wiley Online Library on [24/08/2023]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

open a subscription list for a marine insurance company. By mid-November, Ram had secured a commitment of £1.2 million (m) towards the capital of a firm in a subscription list to be put before parliament.[19] However, at the beginning of December a proposal to amalgamate Ram's venture with that of a rival, James Colebrook, was agreed to be more likely to succeed. Colebrook had secured a financial commitment of £0.8 m, and the new venture united the projects with a total capital of £2 m.[20] Subsequently, a new subscription book was prepared, and the list opened for subscription on 22 December.[21] Following this, a petition proposing the advantages of securing a Corporate Charter was signed by each individual supporter of the Ram and Colebrook scheme and presented to the court by 8 January 1720.[22]

After a number of initial difficulties, a bill of incorporation passed through the House of Commons on 31 May 1720. Having passed the House of Lords, it received Royal assent on 11 June, and the charter was signed on 22 June.[23] With corporate status now validated through parliament, a general meeting of LA Shareholders was held on 28 June and a court of directors was elected. The company was installed in premises by 19 August, although business had already commenced, with the first line insured on 6 July.[24]

This study is conducted using three unique sets of investor records associated with the subscription and launch of the London Assurance Company. The first of these is the set of subscription receipts issued after 22 December 1719.[25] These receipts can be considered the counterfoil to the piece of paper (i.e. the scrip) issued to a subscriber by Ram and Colebrook. They state the name of the holders of scrip, alongside the quantity of shares taken up by the individual. The receipt books run between 22 December 1719 and 18 January 1720, include a number of re-registrations to new individuals, and detail the splitting of some receipts into smaller denominations.

The second data source is a registration document compiled between 12 August 1720 and mid-September 1720.[26] The registration process began after a court of directors meeting on 11 August when it was resolved to call in all scrip.[27] This process marked the transition from receipt trading on the secondary market to a situation in which formal transfer of ownership was conducted by the company. The document records the names of all final receipt holders who committed to registering their receipts, and the number of shares that they registered. Our understanding of how this process was communicated and eventually brought to a close is informed by a series of calls and adverts issued in *The London Gazette*, *The Daily Post*, and *Daily Courant* during the month of August directing individuals to submit their scrip in exchange for shares in the company.

[19] Drew, *The London Assurance*, p. 7.

[20] Drew, *The London Assurance*, p. 11; Scott, *The constitution*, p. 399.

[21] Drew, *The London Assurance*, pp. 11–2; Scott, *The constitution*, pp. 399–400.

[22] Drew, *The London Assurance*, p. 12. See also the Parliamentary inquiry of February 1720 for discussion on the Ram and Colebrook subscription. The inquiry notes that the sums received were to be lodged at the Bank of England under the direction of Sir William Chapman, Sir Jacob Jacobson, and Joseph Eyles for the endeavour of attaining a Charter. See 6 Geo 1 April 22–27, p. 346.

[23] Drew, *The London Assurance*, p. 17; Scott, *The constitution*, p. 402.

[24] Drew, *The London Assurance*, pp. 17–22.

[25] Metropolitan Archive, London, CLC/B/192/MS08725B/001-004.

[26] Metropolitan Archive, London, CLC/B/192/MS08725/003.

[27] The original registration document CLC/B/192/MS 08725/004 has been badly damaged, with a number of entries not legible. Our data have therefore been extracted from CLC/B/192/MS08725/003, which is defined as a copy of that original registration document.

14680289, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/ehr.13256 by NHS Education for Scotland NES, Edinburgh Central Office, Wiley Online Library on [24/08/2023]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

The third source is the series of shareholder registers that were compiled by the company after its registration was complete. All of the individuals in the August registration document have corresponding accounts in the shareholder registers. These registers include the names, occupations, and addresses of all August receipt holders. They also record the names of subsequent shareholders and note all trading activity from 5 September 1720 into the nineteenth century.[28] Together these sources allow us to examine the evolving relationship between the market price and characteristics of the stock, how the bubble influenced short-run investor behaviour, and how it affected long-run ownership, governance, and firm performance.

II | THE EVOLUTION OF THE MARKET FOR LA COMPANY SHARES

When Ram and Colebrook collected a subscription in December 1719, the company's nominal capital was set at £2 000 000. Each share was denominated at £100, and subscribers were required to pay a down payment of 2 shillings and 6 pence per share, and a call of 17 shillings and 6 pence, bringing the share to 1 per cent paid up.[29] In return, they received a receipt (or scrip) detailing how many shares they had subscribed for. The first scrip was issued to individuals on or just after 22 December, and 463 receipt holders were directly registered.

When the registration book closed on 18 January, 444 individuals held scrip.[30] During the period before the book closed, some scrip holders also took the opportunity to re-register and spread their subscription across multiple receipts.[31] The receipt books suggest that the only constraint was that scrip receipts had to be issued in multiples of 10 and could not be split into smaller lots than 10 shares. For example, a person who subscribed for 50 shares could request five separate receipts of 10 shares. After 18 January, however, it appears that no further splitting of scrip was possible. This is evidenced by the August 1720 registration document, in which registrations reflect the denominations issued in January 1720.

Table 1 presents the registration activity of early subscribers during this initial phase of scrip registration. Approximately 70 per cent of the original 463 receipt holders held only one receipt. However, it was common for individuals to hold their subscription across two, three, or four receipts, and 26 individuals held five or more receipts. By 18 January, other investors had taken the opportunity to split receipts into smaller denominations; by this stage 60 individuals held five or more receipts. Partly as a result of receipt splitting, the proportion of receipts that represented a holding of 10 shares rose from 20 per cent on 22 December to 50 per cent on 18 January, with a corresponding decrease in the number of receipts with a large denomination.

By 18 January, of the 463 original receipt holders, 13 individuals had increased their holdings, 35 had partially decreased their holdings, and a further 46 had sold out completely. Across all receipt holders, 121 or approximately 25 per cent of registered subscribers were involved with the re-registration of scrip during this period, and this activity saw the re-registration of 18.8 per cent

[28] Metropolitan Archive, London, CLC/B/192/MS08743B/001-004.

[29] Scott, *The constitution*, p. 400.

[30] Although evidence of joint holdings can be seen in other subscriptions and shareholder lists of this era, we find only one example of joint holdings amongst LA scrip holders.

[31] Re-registrations included transfers to individuals who were already scrip holders, but also new individuals who had been part of the first wave of subscription.

14680289, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/ehr.13256 by NHS Education for Scotland NES, Edinburgh Central Office, Wiley Online Library on [24/08/2023]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

TABLE 1 Receipts issued per investor and denomination of issued receipts, December 1719 and January 1720.

No. of receipts held	1	2	3	4	5	6	7	8	9	10	11+	Total investors	Total receipts
Initial subscribers	329	72	20	16	11	3	7	0	0	3	2	463	
End of receipt re-registration	298	51	22	13	18	10	7	4	2	5	14	444	
Receipt size	**10**	**20**	**30**	**40**	**50**	**60**	**70**	**80**	**90**	**100**	**150**		
Initial subscribers	157	339	133	24	97	7	6	4	2	3	1		773
End of receipt re-registration	528	333	113	21	61	5	3	1	1	0	0		1066

Source: See text.

of the total outstanding receipts.[32] This is notable because William Chapman, one of the LA Company's directors, went on to tell the Parliamentary Committee on 22 February that 'no transfer was made of any of the stock' in the company.[33] As Scott suspected, this was not true.[34] A significant minority of investors not only transferred receipts before 18 January, but also split receipts in an effort to ease future liquidity constraints. Although the company stopped re-registering receipts after this date, scrip continued to be traded.[35]

The prices at which these trades occurred were listed in *Castaing's The Course of Exchange*, and are shown in figure 1. Early 1720 saw relatively little price movement, with scrip trading for between £3 and £6 until 22 April. Thereafter the price rose dramatically, eventually peaking at £135 on 15 August, a rise of 5900 per cent from its level at the end of 1719. Aspects of this price appreciation can perhaps be partially explained by events such as the confirmation of charter in May/early June. During these months the price rose from £14¼ to £55 as the bill set before parliament received royal support in early May, a first reading on 20 May, and assent on 10 June. However, prices continued to advance to £135 after this with no significant new information about the firm being introduced to the market.[36] Prices in this era could have been driven by momentum-based speculation, growing excitement about the potential of insurance in an incorporated company, or a combination of both.

The LA Company's share price created a significant liquidity constraint as prices increased. The minimum receipt denomination was 10 shares, so without using forward contracts, a shareholder could only cash out by finding a single buyer willing to spend at least £1350 at the peak of the

[32] This figure is likely to underestimate the true volume of stock transfer before 18 January. With the trade in scrip requiring simple legal assignment, probably a notarized signature, it is feasible that a significant number of trades had already occurred in the secondary market and were not re-registered in the receipt book.

[33] Scott, *The constitution*, pp. 400–1.

[34] Scott, *The constitution*, pp. 400–1.

[35] A number of news stories in the press confirm this. Firstly, an advert in the *Daily Courant* (8 June 1720) notes the misallocation of a Ram and Colebrook receipt in a transfer. The advert refers specifically to the receipt number and the original holder, and asks that the receipt be returned. The noted information matches the detail in the original receipt book. Secondly, when the company called in £4 of capital at the end of May, they made specific reference to bringing in receipts to aid quicker dispatch (*Daily Courant*, 28 May 1720).

[36] The price appreciation cannot either be attributed to capital calls, the only call during the period of price appreciation occurred at the end of May when a call of £4 was made to scrip holders. See Scott, *The constitution*, pp. 400–2, 411, for details on Parliamentary approval and capital structure changes during this period.

14680289, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/ehr.13256 by NHS Education for Scotland NES, Edinburgh Central Office, Wiley Online Library on [24/08/2023]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

FIGURE 1 Price of London Assurance Shares (£), December 1719–December 1720. *Source*: Frehen et al., '*New evidence*'.

bubble. The lack of volume data in this period makes this liquidity effect difficult to quantify, but it could have been substantial: the minimum transaction size was roughly equivalent to £285 000 today, and many investors were locked into much higher denominations.

Since the LA Company stopped re-registering receipts between January and August, our understanding of share ownership in this period comes from comparing the subscription receipts book to the registration document of August 1720. An analysis of ownership concentration amongst receipt holders in December 1719, January 1720, and September 1720 is presented in table 2. We can see that the re-registration of receipts between December and January slightly increased the concentration of ownership. This trend was reversed by August, and when the share price peaked, the average investor held less subscription stock than they had in January. However, the largest investors had further increased their holdings.

The receipt holders listed in the August 1720 registration document differ significantly from those listed on the subscription receipts of January 1720: only 91 of the 444 registered receipt holders from January registered receipts on or after 12 August 1720. This suggests that substantial trading in scrip must have occurred after the receipt re-registration window closed in January. Since the market price of this stock rose substantially in this period, this also indicates that many initial investors sold at a profit, and most likely did so before the company formation had even been completed. Notably, although each receipt gave its holder the right to buy a full share, it did not impose an obligation to do so. Scrip receipts were therefore more akin to call options than shares.[37] The number of receipts that were not registered is negligible, indicating that in practice, almost no investors defaulted on calls. However, in the early stages of the boom, the implicit default option made scrip a superior instrument of speculation to shares.[38]

[37] Shea, 'Financial market analysis'; idem, 'Understanding financial derivatives'.

[38] Temin and Voth, 'Riding'.

14680289, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/ehr.13256 by NHS Education for Scotland NES, Edinburgh Central Office, Wiley Online Library on [24/08/2023]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

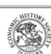
THE ECONOMIC HISTORY REVIEW 

TABLE 2 Ownership concentration amongst receipt holders.

	December 1719		January 1720		September 1720	
	N	Average holding (% of total shares)	N	Average holding (% of total shares)	N	Average holding (% of total shares)
Average holdings						
All	463	0.216	444	0.224	570	0.18
Male	461		442		535	0.18
Female	2		2		35	0.12
Existing shareholders			417	0.21	91	0.31
New shareholders			27	0.50	479	0.15
Total holdings						
Directors	19	9.78	19	9.85	27	11.66
Top 5		6.12		7.19		9.64
Top 10		10.58		11.96		14.38
MPs	8	1.96	9	2.56	18	7.77
No. of shares	19 940		19 900		19 822	

Source: See text.

Notes: The discrepancy in number of shares between December and January is driven by a number of illegible receipts. The further reduction in August is most likely the result of a number of receipts being lost by investors between January and August. Our analysis includes 212 shares that were issued in September to individuals who had previously registered receipts. Our total sum of capital differs by 40 shares from Scott's assessment of the capital (September/December 1720), but less than 10 shares in difference from the capital base outlined in the September 1720 shareholder register. A total of 85 of the 91 existing shareholders in September 1720 had been December 1719 original subscribers.

Investors between January and September were constrained by the denominations of their receipts. This had three effects. Firstly, it was impossible for the majority of investors to partially cash out. At a time when prices were rising so rapidly, it is likely that many investors would have preferred to reduce their holdings, and their doing so may have slowed the increase in prices. Instead, they could only either cash out completely or hold their receipt until the shares were issued. Secondly, those holding a single large denomination may have struggled to find a buyer at the prevailing market prices. Finally, it was impossible for investors to enter the spot market for quantities fewer than 10 shares, limiting the trade to those with the means to buy relatively large amounts of stock.

These constraints could theoretically be circumvented through the use of forward contracts. In practice, however, this was rare. The forward market was plagued by counterparty risk and buying or selling shares forward required the negotiation of complex bespoke contracts with substantial forward premia or discounts.[39] Kleer examines the forward sales agreed to by South Sea Company directors at this time, finding that the prices negotiated were often well below the market rate, particularly for large lots of shares.[40] Only 2.9 per cent of director purchases in Kleer's sample were for future delivery.[41]

[39] Shea, 'Financial market analysis', pp. 754–5; Kleer, 'Riding a wave', pp. 269–71.

[40] Kleer, 'Riding a wave'.

[41] Kleer, 'Riding a wave', p. 269.

14680289, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/ehr.13256 by NHS Education for Scotland NES, Edinburgh Central Office, Wiley Online Library on [24/08/2023]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

The transition from scrip to shares began on 11 August, when a meeting of the LA directors agreed on changes to the terms associated with LA stock. The capital base of the firm was reduced from £2.0 m to £1.5 m, with a new lower nominal value of £25 placed on each of the 20 000 allotted shares. It was suggested that the remaining £1 m would be raised via further rounds of subscription. Furthermore, it was resolved that all receipt holders must register them and sign the book of subscription.[42] To this end, the LA Company issued a number of notices in the *Daily Courant* and *Daily Post* in the last few weeks of August to encourage investors to submit any outstanding receipts for registration so that shareholder registers could be created.[43] Once a receipt had been registered, it could no longer be traded, so the investor was locked in until the shares were issued. This eventually occurred on 5 September, but it is not clear when investors were informed of this date.

The price of LA shares peaked on 15 August. Notably, this was 6 weeks after the price of South Sea shares peaked, and during this time LA shares had continued to rise significantly, largely ruling out the possibility that the crash was immediately attributable to the reversal in South Sea shares.[44] Previous research has argued that the subsequent demise corresponds with Treasury action against a number of companies for not keeping expressly to the limitations of their respective charters.[45] However, this period was also one of rapid structural changes to the market for LA shares.

The meeting of 11 August highlights the first of these significant structural changes. With receipt holders seeing the par value of their shares reduced from £100 to £25, in combination with the proposed issue of 40 000 new shares, the shareholder's capital claim had been significantly eroded.[46] This future dilution in ownership was most likely not well received. Indeed, in June the company went to significant efforts to quell a similar rumour in circulation by saying it was 'false and malicious, and spread by some ill-designing people to spoil the credit of the said stock'.[47]

In addition to this, the transition from scrip to shares had the potential to affect the LA Company's share price. After the company initiated the request to bring in receipts on 11 August, investors had three distinct trading options. Firstly, they could submit their receipts and forego the right to until after the transfer books opened. Submitting receipts also meant committing to fulfilling future capital calls. Secondly, they could sell their receipts. Since the share price peaked on 15 August, almost any sales at this point would have been for a profit. Thirdly, they could temporarily ignore the directors and hold the receipts. This allowed them to maintain liquidity for an additional period before deciding whether to sell the receipt or submit it. However, the directors were at this stage spreading ambiguity about when the final deadline was for the submission of receipts.[48] Investors might therefore have worried that holding the receipt for too long would cause them to inadvertently default on the share.

[42] See the 'request to register' in the foreword to the original 12 August registration document. CLC/B/192/MS 08725/004.

[43] *Daily Courant*, 13 August 1720. 'The Governor and Company of the Corporation of the London Assurance, give notice, that daily attendance is continued until Thursday the 17th instant and no longer, at their house in Cornhill, from the hours of Ten in the morning to One, in order to take in the receipts commonly called Ram and Colebrook'.

[44] The reversal in LA shares also does not correspond with any particular date in the timetable of South Sea subscriptions and calls in Dale, *The first crash*, pp. 102, 163 (although the resulting gradual drain of liquidity from the market was likely to have been a factor).

[45] Frehen et al., 'New evidence'; Raynes, *A history*.

[46] See the forward to the original registration document. CLC/B/192/MS 08725/004; and Drew, *The London Assurance*, p. 7.

[47] See *Daily Courant*, 22 June 1720.

[48] *Daily Courant*, 27 August 1720.

14680289, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/ehr.13256 by NHS Education for Scotland NES, Edinburgh Central Office, Wiley Online Library on [24/08/2023]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

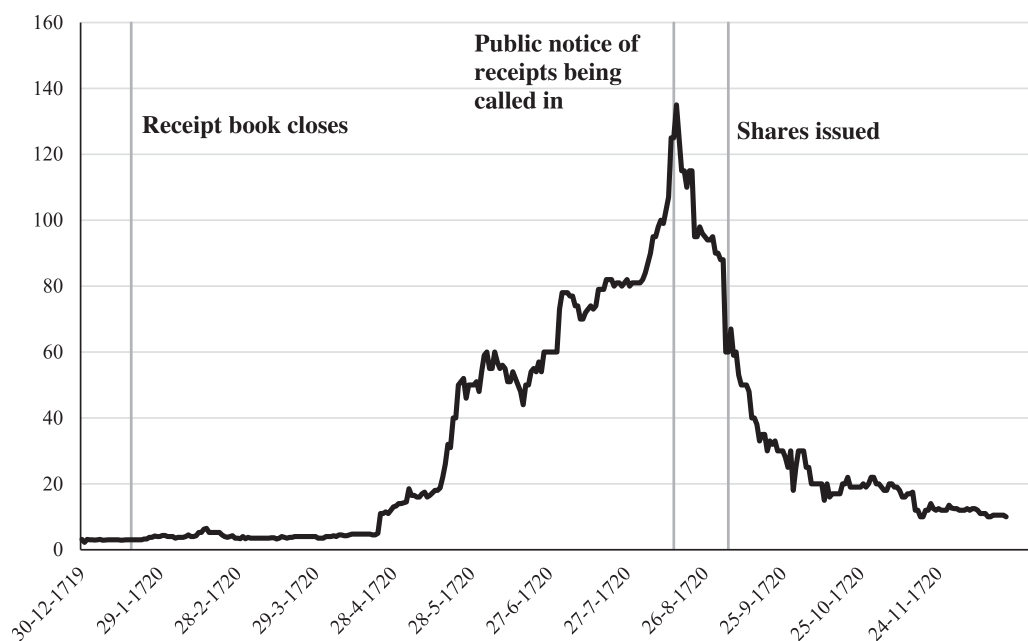


FIGURE 2 Price of London Assurance Shares (£) and structural changes, December 1719–December 1720. *Source*: Frehen et al., '*New evidence*'.

In practice, a minority of investors chose the third option. The shareholder registers indicate that by 15 August, 40 per cent of receipts had been submitted, by 20 August, 84 per cent, and by the end of August, 98 per cent of receipts had been registered with the company. The vast majority of investors thus either submitted their receipts or sold them to other investors who immediately submitted them. The call for receipts would therefore presumably have been associated with a rush to sell, as investors sought to avoid capital calls and the illiquidity of being locked in until transfer journals opened.[49] On 16 August, 5 days after the general meeting, 3 days after investors were publicly informed of it in the *Daily Courant*, and the day before a first suggested cut-off point for receipt registration in that advert, the LA share price fell by 7.4 per cent, signalling the beginning of the crash.[50]

Figure 2 shows the price of LA shares alongside the dates of structural changes. In addition to the 16 August fall, two dates during the transition from scrip to shares stand out for large negative price movements. The first is a 17.4 per cent fall on 22 August, and the second was on 3 September, when the price fell by 31.8 per cent. Frehen et al. propose several fundamentals-based causes of this fall, including the attorney general's attempts to clamp down on firms exceeding their charter, the sinking of a ship reported to be insured by the LA Company, and a burglary at the home of an LA director.[51] However, the fall on 3 September was not associated with any specific news about the

[49] We can date the first post charter capital call to the days before 15 September. On 15 September reference to a call for £5 was published in the *Daily Post*. However, it was highly likely that shareholders knew that such a call was eminent before this, as the company had bound themselves to pay the government £300 000 over a period of 10 months for the privilege of their charter. See Drew, *The London Assurance*, pp. 28–9.

[50] See *Daily Courant* (13 August 1720) for more details on the request to register receipts.

[51] Frehen et al., 'New evidence', p. 594.

14680289, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/ehr.13256 by NHS Education for Scotland NES, Edinburgh Central Office, Wiley Online Library on [24/08/2023]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

TABLE 3 Trading activity between 5 September and 30 November 1720.

	N	November Average holding (shares)	August Average holding (shares)	January receipt holder N	Directors N
Receipt holders who sold out	**130**	–	**21.69**	**22**	–
Remaining receipt holders, of which:	**440**	**30.85**	**37.33**	**69**	**27**
Increased holding	82	48.71	27.93	17	9
Constant	221	–	26.29	22	8
Decreased holding	137	28.54	61.31	30	10
New holders	**657**	**9.76**	–		

Source: See text.
Notes: An additional 145 investors acquired and then sold stock between the 5 September and end of November sample point. A total of 18 of the 657 new holders reported in this period are original subscribers from December 1719 who sold out and returned to ownership between the September and November, and held at the end of November.

LA Company; rather, it can be more closely related to ambiguity surrounding whether the receipts would still be accepted by the company after the 31 August deadline had passed. Shareholder registers reveal that 11 of the 23 outstanding receipts that were accepted after this deadline were submitted by company directors, suggesting that they may have strategically used this ambiguity to purchase receipts at a discount. On 5 September, the first day of share trading, the price rose by 11.2 per cent, perhaps due to new investors entering the market for quantities lower than 10 shares.

Share trading was very active during the first month of trading: calculations based on the transfer records reveal that stock turnover from 5 September to 30 September was 55 per cent. In comparison, the average monthly turnover of Bank of England stock for the whole of 1720 was 9.75 per cent per month, with no single month having a turnover in excess of 18 per cent.[52] Table 3 examines the trading behaviour of the 570 investors who registered receipts in August and September during this period. By the end of November 130 receipt holders had sold out completely, and a further 137 had decreased their holdings. A total of 82 receipt holders had increased their holdings, and 657 new investors had bought stock and held it until our sample point on 30 November. The price during this period continued to fall, with shares losing 81.3 per cent of their value between 5 September and 30 November.

This trading activity resulted in dramatic changes in ownership patterns. Approximately half of August investors who remained at the end of November had adjusted their holdings. New holders who came into ownership between August and November held considerably fewer shares: with a mean holding of 9.76 shares amongst new investors, the majority took an ownership position that had not been possible when the minimum denomination was 10 shares. These changes in holding preference resulted in a substantial increase in ownership diffusion, with 657 individuals entering the company and only 130 individuals exiting, causing the total number of shareholders to rise from 570 to 1097. By the end of November, there were more investors than there

[52] Carlos and Neal, 'The micro-foundations'.

14680289, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/ehr.13256 by NHS Education for Scotland NES, Edinburgh Central Office, Wiley Online Library on [24/08/2023]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

had been receipts in circulation in the early summer. Overall, this suggests that receipts had restricted investors' ability to hold preferred quantities of stock in what was a risky and volatile market.

The results of this section suggest that LA price dynamics were significantly affected by the evolution of market structure. While much less data are available on the other major insurance corporation, the REA, it is clear that it underwent a similar drawn-out issuance process around the same time. Firstly, its share price also peaked on 15 August. Secondly, we can evidence a similar call in the press just before that peak on 13 August, when proprietors were asked to subscribe their shares to open a transfer book, and that similar calls continued in the press through to the end of August.[53] As Frehen et al. show, there is significant covariance between the insurance company share prices and the overall market in this period, so it is notable that during the crash, their prices were not predominantly associated with changes to fundamentals.[54] If news about insurance was not the mechanism by which insurance firms affected the market, what was? One possibility is that the transition from scrip to shares in the LA and REA imposed liquidity shocks that led investors to sell shares in other ventures; however, one would expect the much larger SSC to have had more significant liquidity effects.[55]

Another possibility is that other firms were undergoing similar issuance processes, and LA price movements revealed information about how the transition from scrip to shares might affect the wider market. Harris estimates that a few hundred companies, having a nominal capital of £2–5 m per typical subscription, and a total estimated capital of £224 m, were formed within a period of just over 6 months.[56] If these companies were undergoing a similar prolonged issuance process to the LA Company, the experience of the LA Company may be indicative of the challenges facing the wider stock market at the time.

III | THE SHORT-TERM IMPACT OF THE BUBBLE ON OWNERSHIP

The lengthy issuance process and associated price dynamics noted above appear to have significantly affected the shareholder base. This section of the paper examines the possibility that these changes impacted heavily on the quality of the shareholder base before considering the implications of that on the long run performance of the LA Company in section 5.

The LA Company's founders in 1719 were preoccupied with preventing the affair being associated with stockbrokers and jobbers; it was considered fundamental to its success that it not lend itself to the machinations of those merely concerned with speculation.[57] Contemporaries had been concerned that the presence of stock jobbers and speculators destabilized viable companies in the 1690s.[58] For the company, the ostensible aim was to manage the subscription list to weed out 'speculators', ensuring that the ownership included substantial merchants who desired to see the

[53] See *London Gazette*, 13 August 1720, and the *Daily Courant*, 15 August 1720, 27 August 1720.

[54] Frehen et al., 'New evidence'.

[55] The SSC had issued £9.01 m in attributable nominal capital through its three subscriptions, compared to the much smaller £2 and £1.2 m issues of the LA and REA, respectively. See Dale, *The first crash,* p.115; Scott, *The constitution*, pp. 410–11 for details on capitalization.

[56] Harris, *Industrializing English law*, pp. 61–2.

[57] Drew, *The London Assurance*, p. 8.

[58] See Murphy, *The origins*, pp. 33, 70, for discussion on the ability of stock jobbing to destroy companies.

14680289, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/ehr.13256 by NHS Education for Scotland NES, Edinburgh Central Office, Wiley Online Library on [24/08/2023]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

scheme established on a solid basis. An earlier subscription for the company had been abandoned due to the number of stock jobbers in the list.[59]

Although the subscription documents contain no specific indicators of profession, analysis of names can be used to ascertain the backgrounds of some of the subscribers. We identify three areas where a particular investor would likely add value to the company relative to the average investor: knowledge of marine insurance and international trade, political networks, and financial markets and share trading.

There is significant evidence of marine insurance and mercantile knowledge. In total, 20 of the directors who elected to oversee the company in July 1720 were subscribers. Of these, 17 had significant links to other companies and merchant networks. These include directorships with the Bank of England, East India Company, Royal Africa Company, Levant Company, and links to mercantile communities in France, Spain, Turkey, and North America.[60] As part of mercantile networks, it is likely that the directors encouraged other members of their networks to subscribe. Thirteen directors bought and sold during the subscription phase, and 11 sold a component of their holding to non-director subscribers.

In a petition submitted by 379 London merchants to the special committee in favour of the incorporation, 338 were present in the subscription list, indicating that a significant number of subscribers were drawn from the mercantile community.[61] The largest non-director holder, with 480 shares, was Edward Seward, a merchant with interests in North America. Family names, including Bosenquet, Gambier, Gampert, Gaussen, and Hyde, correspond to attested large mercantile interests.[62] There were numerous Dutch, French, and Spanish names, which most likely represented individuals with developed mercantile or financial interests.[63] For example, the Spanish names are likely to represent the Marrano Jewish population that were well established in London and Amsterdam.

To analyse the presence of individuals with deep knowledge of financial markets, we look for 14 individuals identified by Carlos and Neal as the most active traders of BoE stock in 1720.[64] These can be classified as significant share brokers. Of these, four were LA subscribers. John Caswall is also listed as a subscriber, the son of Sir George Caswall, and a director of the Sword Blade Bank, a bank with widespread investment interests. John Child, the company secretary of the bank, was also a subscriber. Of course, their presence can be interpreted as the presence of large stock jobbers or speculators, precisely the type of shareholder that the founders wished to avoid. However, Carlos and Neal categorize them as large brokers, arguing that they acted as intermediaries to other large investors and brought expertise in navigating financial markets.

There were also nine MPs amongst the subscribers. These included Viscount Walter Chetwynd, who played the critical role in navigating the bill through parliament. Other MPs with significant financial and mercantile roles included Horatio Townsend, a director of the Bank of England, and

[59] Drew, *The London Assurance*, p. 5.

[60] Aldous and Condorelli, 'An incomplete revolution', p. 252.

[61] LMA CLC/B/192/MS08760, 'Special report from the committee', petition from 'a considerable part of the body of merchants on the exchange in London, and the persons who pay the premios for such insurances'.

[62] Finn and Smith, *East India Company at home*, pp. 215–72.

[63] Trivellato, *The familiarity of strangers*, pp. 194–223.

[64] Carlos and Neal, 'The micro-foundations', p. 512: Sir George Caswall, Robert Westley, James Martin, Francis Pereira, Abraham Craiesteyn, Samuel Strode, Solomon Pereira, Thomas Houghton, Gerard Bolwerk, Moses Hart, Robert Tothill, Anthony da Costa, Johanna Cock, and Philip Vanenderen.

14680289, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/ehr.13256 by NHS Education for Scotland NES, Edinburgh Central Office, Wiley Online Library on [24/08/2023]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

14680289, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/ehr.13256 by NHS Education for Scotland NES, Edinburgh Central Office, Wiley Online Library on [24/08/2023]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

John Ward, a director of the East India Company. Joseph Eyles, a director of the LA, BoE, and EIC, was elected as MP in 1722.

Other subscriptions, such as the BoE in 1694, included a number of aristocrats and members of the royal family in an effort to provide legitimacy and smooth political progress, but with no real business insight. With the exception of Viscount Chetwynd, the LA Company subscription list does not appear to contain any individuals with aristocratic or royal connections. Those with the appellation 'Sir' were predominantly merchants, such as Sir William Chapman and Sir Jacob Jacobsen.

While this is in no way a comprehensive analysis of all subscribers, it is indicative of the aims of the subscription process and the groups represented within the LA's subscription list. Whilst there were almost certainly speculators, it is clear that there was significant expertise and knowledge from mercantile and financial communities within the original subscription list.

The cohort of original subscribers, by definition, had also been involved with the company prior to the influx of new investors in the spring and summer of 1720. They therefore almost certainly had a significantly greater understanding of the LA Company than the average investor in August 1720. The bubble in LA shares presented these investors with the option to cash out for a large and immediate capital gain: Temin and Voth have argued that informed investors were able to 'ride' the South Sea Bubble, cashing out at a profit.[65] The vast majority of January receipt holders, 353 out of 444, sold all of their shares between January and August 1720.

While this could suggest that many of these original investors were choosing to exit because they knew LA shares were overvalued, it may also simply be the result of generally high turnover in a newly established company. We address this concern in two ways. First, we examine whether January receipt holders were more likely to sell their shares in the period immediately after trading opened, the earliest period for which we have direct records of sales.[66] Second, we compare the turnover in LA shares with the turnover in Bank of England shares in the period following its incorporation in 1694. While this comparison is not perfect, it gives some indication of how much shareholder turnover one would expect a new company to experience in the absence of a bubble.

The LA Company began recording all trades in its shares on 5 September 1720, and we examine trading activity during the remainder of September. Although the LA share price had fallen from its peak, it was still much higher than it had been in January, and it was therefore still possible for early subscribers to sell at a profit. Furthermore, for investors that had been constrained by high denomination receipts, this may have represented the first opportunity to cash out at the market price. The date 5 September also represented the first opportunity to partially cash out for fewer than 10 shares.

We begin by restricting our sample to the 570 investors who registered receipts prior to the issuance of shares. A total of 29 of these investors are excluded, as they provided no address or an illegible address, resulting in a sample of 541 investors.[67] This sub-sample is then categorized into three groups: those who reduced their holdings during the period between 5 September and 31 September, those who increased their holdings during this period, and those whose holdings stayed the same. We then run a series of logit regressions in which membership of each group is the dependent variable. The independent variables are whether the investor was a January receipt holder in the firm, whether they were a director, whether they were an insurance policy holder,

---

[65] Temin and Voth, 'Riding'.

[66] A total of 85 of the 91 January receipt holders had been original subscribers in December 1719.

[67] For the sake of robustness, the analysis was repeated with these investors included and no distance variable. The results were very similar.

TABLE 4 London Assurance Company shareholder summary statistics.

Dependent variables	Obs	Mean	Std. dev.	Min	Max
Reduced holdings	541	0.43	0.50	0	1
Increased holdings	541	0.12	0.33	0	1
Constant holdings	541	0.45	0.50	0	1
Sold out entirely	541	0.19	0.39	0	1
Independent variables					
January receipt holder	541	0.17	0.37	0	1
Director	541	0.05	0.21	0	1
Insurance holder	541	0.10	0.30	0	1
Log distance from exchange alley	541	0.20	2.17	−9.26	8.65
Male	541	0.94	0.24	0	1

Source: See text.

TABLE 5 Determinants of trading behaviour during the bubble in LA shares.

	Decreased holdings in September	Increased holdings in September	No trades in September	Sold out completely in September
January receipt holder	0.772**	0.071	−0.877**	0.700*
	(0.256)	(0.367)	(0.28)	(0.296)
Director	0.836	−0.704	−0.593	−1.857
	(0.509)	(0.717)	(0.575)	(1.077)
Insurance holder	−0.229	0.798	−0.235	−0.609
	(0.346)	(0.423)	(0.359)	(0.487)
Log distance from exchange alley	−0.015	−0.097	0.063	−0.034
	(0.041)	(0.055)	(0.042)	(0.049)
Male	0.729	−0.106	−0.597	0.469
	(0.419)	(0.559)	(0.376)	(0.55)
Intercept	−1.120**	−1.936***	0.515	−1.938***
	(0.408)	(0.537)	(0.157)	(0.535)

Source: See text .
Notes: Logit regression. Robust standard errors in parentheses. *, **, *** indicate significance at 5%, 1%, and 0.1% levels, respectively.

and the log of the distance of their stated address from Exchange Alley. We also include a dummy variable for gender as a control variable and run an additional regression in which the dependent variable is whether the investor had completely sold out by the end of September 1720. Summary stats for all variables are presented in table 4.

The results of these regressions are presented in table 5. Effect sizes are found by exponentiating the coefficients. January receipt holders were 2.16 times as likely to decrease their holdings in September, and 2.01 times as likely to sell out completely. Although January receipt holders were no less likely to increase their holdings at this time, they were significantly less likely to conduct no trading activity at all, indicating that these investors were both more active and better able

14680289, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/ehr.13256 by NHS Education for Scotland NES, Edinburgh Central Office, Wiley Online Library on [24/08/2023]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

THE
ECONOMIC HISTORY REVIEW

TABLE 6 Turnover of investors, London Assurance and Bank of England.

London Assurance Company				**Bank of England**			
Panel A: comparison of investor turnover							
		Number	**% Remaining**			**Number**	**% Remaining**
Subscribers December 1719		463	–	Subscribers June 1694		1262	
In ownership after	1 year	87	19	Remaining after	1 year	1086	86
	2 years	77	17		2 years	979	78
Panel B: medium-term investor turnover following the peak of the bubble							
		Number	**% Remaining**			**Number**	**% Remaining**
Shareholders 12 August		570		September 1720		3198	
Shareholders March 1725		162	28	September 1725		2022	63

Source: See text.

Notes: A total of 23 and 19 of the respective 87 and 77 LA subscribers who were in ownership of stock 1 and 2 years on from the initial subscription had re-entered ownership after previously selling out completely before the peak of the bubble.

to time their sales. No other independent variable is significant at a 5% level. The large size of the director standard error indicates that these regressions lack the statistical power to come to a firm conclusion about the trading behaviour of directors. This may be due to the small number of directors, or due to a positive correlation between whether an investor was a director and whether they were a January receipt holder. These results indicate that January receipt holders were significantly more likely to sell out during the bubble than the average investor, indicating that their exodus was not simply an artefact of generally high turnover.

To examine whether such a sell out of subscribers was the norm for newly established companies during this era, we conduct a comparison with investor turnover in the Bank of England immediately after its establishment in 1694. The names of the original BoE investors are obtained from the index to the 1694 book of subscriptions and cross-referenced with the shareholder account in the Bank stock ledgers.[68] Since BoE shares did not experience a bubble following subscription, this gives some indication of how much turnover might be expected under ‘normal’ financial conditions. The turnover in LA and Bank of England shareholders in the periods following their respective establishments is presented in table 6. One year after its foundation, 86 per cent of the original subscribers to the BoE still held shares in the company; for the LA Company, only 19 per cent of original subscribers remained. [69] Similarly, and to confirm this was not a phenomenon experienced by all companies during the bubble, we compare medium-term investor turnover with the BoE after the peak of the bubble in Panel B. Again we find that the LA Company experienced much higher shareholder turnover.

[68] Bank of England Archive. Index to the book of subscriptions 1694 (10A285/1), and bank stock ledgers (AC27/414,7,8).

[69] We have also reviewed exit and re-entry amongst the cohort of LA subscribers to see if they had sold out during the bubble and re-entered before our sample point. We find that 23 and 19 of the respective 87 and 77 subscribers who were in ownership of stock 1 and 2 years on from the initial subscription had re-entered ownership after previously selling out completely before the peak of the bubble.

14680289, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/ehr.13256 by NHS Education for Scotland NES, Edinburgh Central Office, Wiley Online Library on [24/08/2023]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

IV | THE LA COMPANY'S LONG-TERM OWNERSHIP AND PERFORMANCE

The LA Company and REA were the only companies launched in the bubble to achieve significant longevity.[70] However, contemporary expectations that the two insurance companies would dominate the market did not come to pass.[71] It was estimated that the two joint-stock companies managed to gain 10 per cent of the market when launched, but that had declined to 3 per cent by 1810 and averaged around 6 per cent until 1823.[72] The LA's revenues from premia initially increased in the early 1720s, but steadily declined until the 1740s, as did profits.[73] The private underwriters, particularly those operating through Lloyds, remained the dominant players in the market. The failure of the corporations to supplant the private underwriters has become a recurring question.[74]

There are various proposed explanations for this outcome. Bogatyreva argues that the corporations were only ever intended as speculative stock-jobbing ventures, not viable businesses.[75] Kingston finds that the private underwriters were able to outcompete the corporations due to their improved capacity in addressing information asymmetries.[76] Aldous and Condorelli attribute the underperformance of the corporations to various governance challenges, suggesting that their efforts to curb the power of directors limited their ability to compete aggressively with private underwriters.[77]

This section examines how the 1720 bubble and its bursting affected the ownership, governance, and performance of the LA Company in the long run, arguing that the loss of the informed investors who could potentially have been useful for the running of the company (discussed above) had a negative impact on the company as they were replaced, firstly by unsuccessful speculators, and then by extremely passive investors who failed to provide market discipline. It is argued that this adverse change to the shareholder base contributed to the LA Company's underperformance.

We first analyse the investment horizon of shareholders through attrition rates, which are derived from the subscription receipts, the shareholder registration document of August 1720, and shareholder registers. Table 7 presents the investment horizons of LA investors who bought in after the bubble as being the shortest of any subgroup during the bubble period. Investors in the 1737 sample point demonstrate that long-term buy-and-hold investment became commonplace: the average holding period had grown to more than 20 years, and of the 585 shareholders registered in 1737, 323 held their shares until death. The average size of holding had increased to a level similar to that of August 1720. In other words, the ownership diffusion and reduction in average holdings seen in the months that followed August 1720 had been gradually reversed, and the investment horizon significantly extended.

[70] Both survived as independent entities until the 1960s when the London Assurance became a subsidiary of Sun Alliance in 1965; Royal Exchange merged with the Guardian Assurance Company in 1968.

[71] John, 'The London Assurance Company'; Supple, *The Royal Exchange*.

[72] A Letter to Jasper Vaux [...] in which the [...] extent of marine assurance is examined, by a subscriber to Lloyd's, London, 1810. (Kingston, 'Marine insurance', p. 384.)

[73] Kingston 'Marine insurance', figure 1, p.390.

[74] Pearson and Doe, 'Organizational choice'; Kingston, 'Marine insurance'; Select Committee on Marine Insurance, 'Report from the Select Committee on Marine Insurance', London: House of Commons, 1810.

[75] Bogatyreva, 'England 1660–1720'.

[76] Kingston, 'Marine insurance'.

[77] Aldous and Condorelli, 'An incomplete revolution'.

14680289, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/ehr.13256 by NHS Education for Scotland NES, Edinburgh Central Office, Wiley Online Library on [24/08/2023]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

14680289, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/ehr.13256 by NHS Education for Scotland NES, Edinburgh Central Office, Wiley Online Library on [24/08/2023]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

TABLE 7 Investment horizons of shareholders 1720–2 and 1737.

		Bubble period (ALL)				1737		
		All	August 1720	September–October 1720	November 1720–August 1722	All	Sold whilst alive	Held until death
All	Years (Av)	4.02	5.75	3.07	3.46	20.91	13.38	27.03
	Years (Med)	1.48	1.91	1.42	1.08	17.42	10.64	23.28
	N	1860	567	666	627	585	262	323
Men	Years (Av)	3.92	5.71	2.89	3.36	21.96	13.21	–
	Years (Med)	1.41	1.9	1.35	1.04	18.66	11.35	–
	N	1722	532	622	568	431	183	–
Women	Years (Av)	5.28	6.37	5.65	4.36	17.98	13.76	–
	Years (Med)	1.92	1.95	1.92	1.78	14.34	9.2	–
	N	138	35	44	59	154	79	–

Source: See text.

TABLE 8 Investment horizons of August 1720 receipt holders by occupation and gender.

	Number	Median holding duration, years	Mean holding duration, years	Holding for +12 months		Holding for +60 months	
				N	%	N	%
Businessmen	207	2.05	5.93	131	62.98	52	25.00
Finance industry	28	1.06	2.59	15	53.57	5	17.86
Middle class	19	4.47	6.37	12	63.16	5	26.32
Military	21	1.58	5.61	13	61.9	6	28.57
Rentier	215	1.85	5.93	141	65.28	60	27.78
Women	34	2.02	6.51	28	80	8	22.86
Male unknown	43	1.95	5.28	31	72.09	12	27.91
All shareholders	567	1.91	5.75	371	65.09	148	25.96

Source: See text.
Notes: Three shareholders have been removed from our analysis of the 570 receipt holders because we were unable to establish an exit date due to clerical errors in the construction of the register. Businessmen include those involved in manufacturing and the mercantile community. Finance industry includes those individuals who define themselves by an occupation that could be grouped in the financial sector. Rentiers include gentlemen, esquires and nobility. Middle class investors are a grouping of primarily legally trained, medical professional, or other white collar occupations.

Can the high level of attrition and change in investor behaviour be explained through analysis of shareholder occupation and gender? Table 8 examines the relationships between occupation, gender, and investment horizons in August 1720. Investors with a financial occupation had the shortest mean holding duration of 2.59 years. Those from middle class occupations and women had the longest, with 6.37 and 6.51 years, respectively. These findings are consistent with extant literature suggesting that those in finance were more likely to trade regularly, and women were more likely to adopt a more conservative strategy.[78]

[78] Carlos and Neal, 'The micro-foundations', p. 521. However, Froide, *Silent partners*, identifies more varied female investor behaviour between 1690 and 1750.

TABLE 9 Holding patterns of key investor cohorts, August 1720.

Investor cohort	N	% Subscriber at 18 January	Avg. holding August 1720	Duration of ownership (%) 12+ months	60+ months
All	570	0.16	34.78	0.65	0.26
18 January holders	91	All	61.54	0.69	0.38
Directors	27	0.78	85.63	1.00	0.74
Insurance line holders	58	0.52	57.45	0.86	0.52
Largest shareholders	10	0.50	285.00	1.00	0.50
MPs	18	0.11	85.56	0.89	0.38

Source: See text.

Business and rentier occupations made up the majority of the August 1720 shareholder body, accounting for 422 of 567 individuals. Whilst both groups had a mean average duration of 5.93 years, rentiers had a lower median average of 1.85 compared with 2.05 for the business cohort. Attrition was slightly higher amongst the business cohort when looking at the proportion who held for more than 60 months. It is plausible that amongst both groups there was a significant number who acted as short-term speculative investors responding to the bubble. However, the higher median average amongst the business group indicates a preference to hold beyond the bubble period, indicating differences in the cohort that require further analysis.

The broadly defined business cohort in the occupational data can be more tightly specified through analysis of five cohorts that were particularly important to the functioning of the company: directors, large shareholders, insurance line holders, MPs and January receipt holders. As presented in table 9, directors and insurance line holders had the longest holding patterns, with 74 per cent of the original directors holding for over 5 years, and 52 per cent of insurance line holders holding for the same period. The 10 largest shareholders all held throughout the bubble period, only beginning to exit after August 1721, with 50 per cent still holding after 5 years. January receipt holders and MPs had higher attrition rates, with under 40 per cent remaining for 5 years.

To determine which characteristics most affected the investment horizon for shareholders, we run OLS regressions using a sample of all investors who held shares at any time between September 1720 and July 1722, where the dependent variable is the log of the period held in years. The independent variables are whether the investor was an investor in January 1720, whether they acquired before or during August 1720, whether they acquired between September and October in 1720, whether they were a director, whether they were an insurance holder, whether they were male, and the log of the distance of their stated address from Exchange Alley. Summary statistics of these variables are presented in table 10. Of the 1869 investors in the sample, 273 provided no address or an illegible address. We therefore run a specification of the regression in which the address variable is excluded.

The results are presented in table 11. The findings support those noted above. A 1 per cent increase in distance from the London Stock Exchange is associated with a 0.13 per cent longer holding period. The most likely explanation for this relationship is that it made speculative investment strategies less convenient. In the first specification, insurance line holders held for 122 per cent longer, women held for 84 per cent longer, and directors held for 430 per cent longer. Investors who had acquired their shares as receipts prior to September 1720, but not sold during the crash,

14680289, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/ehr.13256 by NHS Education for Scotland NES, Edinburgh Central Office, Wiley Online Library on [24/08/2023]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

THE
ECONOMIC HISTORY REVIEW

TABLE 10 London Assurance Company shareholders summary statistics.

Variable	Obs	Mean	Std. dev.	Min	Max
Log distance from exchange alley	1596	0.11	2.62	−9.26	8.65
January receipt holders	1869	0.05	0.22	0	1
Held shares at company formation	1869	0.3	0.46	0	1
Acquired in September–October 1720	1869	0.36	0.48	0	1
Acquired from November 1720 onwards	1869	0.34	0.47	0	1
Male	1869	0.93	0.26	0	1
Director	1869	0.01	0.12	0	1
Insurance holder	1869	0.05	0.21	0	1

Source: See text.

TABLE 11 Factors influencing the period of time for which London Assurance Shares were held.

	Specification	
	1	2
Log distance from London Stock Exchange (km)	0.136***	
	–0.019	
January receipt holder	0.390	0.460
	0.25	0.25
Acquired before or during August 1720	0.411***	0.524***
	0.12	0.11
Acquired in September or October 1720	–0.171	–0.060
	0.12	0.11
Female	0.608***	0.793***
	0.17	0.15
Director	1.667***	1.709***
	0.27	0.28
Insurance holder	0.800***	0.772***
	0.21	0.20
Constant	–0.182*	–0.271**
	0.09	0.08
R^2	0.087	0.053
No. of observations	1596	1869

Source: See text.

Notes: The dependent variable is the log of the period in years for which shares were held. Specification 2 excludes the log distance variable. Robust standard errors in parentheses. *, **, *** indicate significance at 5%, 1%, and 0.1% levels, respectively. Effect sizes for dummy variables, reported in the text, are calculated using the formula $100 \times (\exp(\beta) - 1)$ where β is the variable's coefficient.

14680289, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/ehr.13256 by NHS Education for Scotland NES, Edinburgh Central Office, Wiley Online Library on [24/08/2023]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

held for 51 per cent longer on average. This suggests that a minority of early investors were either very passive or deeply committed to the company. A plausible explanation is that a core group sought to ensure access to insurance products. This behaviour is similar to that displayed by many Scottish bank shareholders in the mid-nineteenth century who acquired stock to gain privileged access to bank finance.[79]

These findings show that the composition of the shareholder body changed significantly from subscription through to launch and changed again in the aftermath of the bubble. The original subscribers of 1719 had signed up to the Ram and Colebrook subscription, suggesting a long-standing interest in forming a large insurance corporation. Furthermore, as a body of individuals, they had been curated to ensure the success of the company. The enormous rise in the LA Company's share price presented these investors with an opportunity for substantial short-term profits. More than 80 per cent of these investors had fully sold out before the company formally issued shares and did not subsequently return to ownership, and many more sold shares in the remaining months of 1720.[80] As a result, some of the most knowledgeable shareholders were replaced by investors who bought shares near the peak of a bubble. At best, these new investors can be considered unsuccessful speculators, and they could justifiably be thought of as highly uninformed. The bubble thus directly led to a loss of shareholder expertise, supporting claims that the corporation had an informational disadvantage relative to underwriters.[81]

The diffusion that led to the influx of speculative investors who joined in 1720, and subsequent attrition in the immediate aftermath of the bubble, saw value-adding investors gradually replaced by passive investors, particularly members of the rentier classes and women who held shares primarily for their dividend income.[82] Those investors who remained from the original subscription were similarly more likely to behave passively. The tendency of these investors was to hold their shares with a focus on dividend income only, and the LA Company paid steady dividends in this period. Half-yearly dividends fell from 10 shillings in 1723 to 5 shillings in 1724, rising to 6 shillings in the 1730s. Together these factors meant there was little pressure from shareholders to encourage the directors to aggressively compete with private underwriters.

Although other large corporations such as the BoE and trading companies such as the EIC faced similar patterns of shareholder stability and limited activism, they faced distinctly different industry structures to the LA. Both the BoE and EIC benefited from monopoly status, which significantly limited the pressures from competition. Despite a regulatory lock-out of other incorporated companies, marine insurance remained a highly competitive market. Private underwriters, particularly those linked to Lloyds, developed networks and innovated processes to adapt to the volatile environment shaping international trade and insurance in the eighteenth century.[83] As Aldous and Conderelli demonstrate, the LA had already failed to capitalize on its strategic advantages within its first year of operations. Lacking impetus from its shareholder body for innovation, the LA became a minor player in the marine insurance industry.[84]

[79] Acheson and Turner, 'Investor behaviour'.

[80] Only 23 of 378 exiting subscribers returned by the December 1720 sample point.

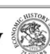
[81] Kingston, 'Marine insurance'.

[82] This argument builds on the contemporary arguments noted by Murphy, *The origins,* p. 224, and Scott, *The Constitution,* p. 96 on stock jobbing and its longer-term impact on company performance.

[83] Kingston, 'Marine insurance'.

[84] Aldous and Condorelli, 'An incomplete revolution'.

14680289, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/ehr.13256 by NHS Education for Scotland NES, Edinburgh Central Office, Wiley Online Library on [24/08/2023]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

THE ECONOMIC HISTORY REVIEW 

V | CONCLUSION

This paper uses several sources of new data on the LA Company to address debates in the historiography of the South Sea Bubble. We outline how the trade of scrip functioned outside of the South Sea Company, and how this affected liquidity and share prices. While prices did respond to news about fundamentals, they responded more sharply to capital calls, changes in liquidity, and the transition from scrip to shares. By documenting the effect of these market structure factors on the market for LA Company shares, we show that they were relevant beyond the highly politicized South Sea issue. These mechanisms plausibly explain the share price movements of other newly formed companies in the bubble period.

We then document the behaviour of investors who were involved in the LA Company from an early stage. The list of original subscribers was carefully curated for relevant mercantile experience and political connections, but almost all of these investors left the company in the first year of its existence. This contrasts with significantly lower attrition in the shareholder base of the Bank of England at launch and in the year following its establishment, suggesting that the main reason for attrition in LA shares was the opportunity for large immediate profit-taking presented by the bubble. This is the first newly established company to be examined in this way. Our findings show how financial bubbles can transform the ownership base of a firm, in this case leading to the exodus of value-adding individuals from the firm's shareholder base.

Finally, the paper analyses the under-examined long-run impact of the bubble on corporate ownership and performance. Due to the bubble, the company's ownership became dominated first by unsuccessful speculators, then by passive rentiers. The resulting lack of expertise supports claims of an informational disadvantage relative to private underwriters, whilst the loss of market discipline supports the view of Aldous and Condorelli that the LA Company underperformed private underwriters because of ownership and governance issues.[85] These results illustrate the importance of understanding the structure of early stock markets when investigating the causes of price movements. The assumption of a continuously liquid market, which underpins a lot of modern financial theory, does not necessarily hold, and this has consequences for how prices are generated. As 1720 demonstrates, these price movements can then have significant economic and political consequences. In the case of the LA Company, they had consequences for its shareholder base, which affected its performance for several decades into the future. This finding could have economic implications beyond 1720. The dot com crash of 2000, for example, has been linked to founders selling shares at a premium after lockup agreements expired.[86] The experience of the LA Company opens a potential new avenue for research studying the effects of financial bubbles on long-term firm performance.

ACKNOWLEDGEMENTS

This work was supported by the British Academy (award no. SG090281). We are grateful to Giovanni Federico and three anonymous referees of this journal who gave us detailed and helpful feedback. We would also like to thank Fabio Braggion, Ronan Gallagher, John Turner, seminar participants at the University of Edinburgh and Queen's University Centre for Economic History, and attendees at the Association of Business Historians Conference (University of Strathclyde), Bubble Act Conference (University of Southampton), Economic History Society Conference

[85] Aldous and Condorelli, 'An incomplete revolution'.

[86] Ofek and Richardson, 'DotCom Mania'.

14680289, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/ehr.13256 by NHS Education for Scotland NES, Edinburgh Central Office, Wiley Online Library on [24/08/2023]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

(Cambridge University), and European Historical Economics Society (University of Groningen) for their input on an earlier version of this paper. Thanks also to Katie Henderson and the archivists at the London Metropolitan Archive and the Bank of England for all of their assistance with the research underpinning this work.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

ORCID

Graeme Acheson https://orcid.org/0000-0001-7531-2082

REFERENCES

Acheson, G. G. and Turner, J. D., 'Investor behaviour in a nascent capital market: Scottish bank shareholders in the nineteenth century', *Economic History Review*, 64 (2011), pp. 188–213.

Aldous, M. and Condorelli, S., 'An incomplete revolution: corporate governance challenges of the London Assurance Company and the limitations of the joint-stock form, 1720–1725', *Enterprise & Society*, 21 (2020), pp. 239–70.

Bogatyreva, A., 'England 1660–1720: corporate or private?', in A. B. Leonard, ed., *Marine insurance origins and institutions, 1300–1850* (Basingstoke, 2016).

Braggion, F., Frehen, R. and Jerphanion, E., 'Credit provision and stock trading: evidence from the South Sea Bubble', CEPR Discussion Paper No. DP14532 (2021).

Carlos, A. M., Maguire, K. and Neal, L., 'Financial acumen, women speculators, and the Royal African Company during the South Sea bubble', *Accounting, Business and Financial History*, 16 (2006), pp. 219–43.

Carlos, A. M. and Neal, L., 'The micro-foundations of the early London capital market: Bank of England shareholders during and after the South Sea bubble, 1720–25', *Economic History Review*, 59 (2006), pp. 498–538.

Clapham, J., *The Bank of England: a history*, 2 vols (Cambridge, 1970).

Dale, R., *The first crash: lessons from the South Sea bubble* (Princeton, 2004).

Dale, R. S., Johnson, J. E.V. and Tang, L. 'Financial markets can go mad: evidence of irrational behaviour during the South Sea bubble', *Economic History Review*, 58 (2005), pp. 233–71.

Dickson, P. G. M., *The financial revolution in England: a study in the development of public credit, 1688–1756* (New York, 1967).

Drew, B., *The London Assurance: a second chronicle* (Plaistow, 1949).

Finn, M. and Smith, K., eds., *East India Company at home, 1757–1857* (London, 2018).

Frehen, R., Goetzmann, W. and Rouwenhorst, K. G., 'New evidence on the first financial bubble', *Journal of Financial Economics*, 108 (2013), pp. 585–607.

Froide, A. *Silent partners: women as public investors during Britain's financial revolution, 1690–1750* (Oxford, 2017).

Harris, R., 'The Bubble Act: its passage and its effects on business organization', *Journal of Economic History*, 54 (1994), pp. 610–27.

Harris, R., 'Political economy, interest groups, legal institution, and the repeal of the Bubble Act in 1825', *Economic History Review*, 2nd ser., L (1997), pp. 675–96.

Harris, R., *Industrializing English law: entrepreneurship and business organization, 1720–1844* (Cambridge, 2000).

Hoppit, J., 'Financial crises in eighteenth-century England', *Economic History Review*, 2nd ser., XXXIX (1986), pp. 39–58.

Hoppit, J., 'The myths of the South Sea Bubble', *Transactions of the Royal Historical Society*, 12 (2002), pp. 141–65.

John, A. H., 'The London Assurance Company and the marine insurance market of the eighteenth century', *Economica*, 25 (1958), pp. 126–41.

Kingston, C., 'Marine insurance in Britain and America, 1720–1844: a comparative institutional analysis', *Journal of Economic History*, 67 (2007), pp. 379–409.

Kleer, R., '"The folly of particulars": the political economy of the South Sea Bubble', *Financial History Review*, 19 (2012), pp. 175–97.

14680289, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/ehr.13256 by NHS Education for Scotland NES, Edinburgh Central Office, Wiley Online Library on [24/08/2023]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

Kleer, R. A., 'Riding a wave: the company's role in the South Sea Bubble', *Economic History Review*, 68 (2015), pp. 264–85.

Murphy, A. L., *The origins of English financial markets: investment and speculation before the South Sea Bubble* (Cambridge, 2009).

Ofek, E. and Richardson, M., 'DotCom Mania: the rise and fall of internet stock prices', *Journal of Finance*, 58 (2003), pp. 1113–37.

Pástor, L. and Veronesi, P., 'Technological revolutions and stock prices', *American Economic Review*, 99 (2009), pp. 1451–83.

Paul, H., *The South Sea bubble: an economic history of its origins and consequences* (London, 2010).

Pearson, R. and Doe, H., 'Organizational choice in UK marine insurance', in R. Pearson and T. Yoneyama, eds., *Corporate forms and organizational choice in international insurance* (Oxford, 2015), pp. 47–67.

Quinn, W. and Turner, J. D., *Boom and bust: a global history of financial bubbles* (Cambridge, 2020).

Raynes, H. E., *A history of British insurance* (London, 1948).

Scott, W. R., *The constitution and finance of English, Scottish and Irish joint-stock companies to 1720*, Vol. 3 (Cambridge, 1911).

Shea, G. S., 'Financial market analysis can go mad (in the search for irrational behaviour during the South Sea bubble)', *Economic History Review*, 60 (2007), pp. 742–65.

Shea, G. S., 'Understanding financial derivatives during the South Sea bubble: the case of the South Sea subscription shares', *Oxford Economic Papers*, 59 (2007), pp. 73–104.

Supple, B., *The Royal Exchange Assurance: a history of British insurance, 1720–1970* (Cambridge, 1970).

Temin, P. and Voth, H.-J., 'Riding the South Sea bubble', *American Economic Review*, 95 (2004), pp. 1654–68.

Trivellato, F., *The familiarity of strangers: the Sephardic diaspora, Livorno, and cross-cultural trade in the early modern period* (New Haven, 2009).

PRIMARY SOURCES

Bank of England, Index to the book of subscriptions, 1694'. 10A285/1, Bank of England Archive, London.

Bank of England, Early Bank stock ledgers. AC27/414,7,8, Bank of England Archive, London.

Journal of the House of Commons. 6 Geo April 26th–27th 1720, pp. 341–51.

London Assurance, 'Original Subscription Book, 1720'. CLC/B/192/MS 08725/004, Metropolitan Archives, London.

London Assurance, 'Copy of the Subscription Book of Ram and Colebrook's receipts into the Capital Stock of the Ship Charter. August 12th 1720'. CLC/B/192/MS08725/003, Metropolitan Archives, London.

London Assurance, 'Receipt book for share subscriptions, 1719'. CLC/B/192/MS08725B/001-004, Metropolitan Archive, London.

London Assurance, 'Marine department, Ship charter stock ledgers with proprietors 1720–1853'. CLC/B/192/MS08743B/001-004, Metropolitan Archive, London.

How to cite this article: Acheson, G., Aldous, M. and Quinn, W., 'The anatomy of a bubble company: The London Assurance in 1720', *Economic History Review*, (2023), pp. 1–25. https://doi.org/10.1111/ehr.13256

14680289, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/ehr.13256 by NHS Education for Scotland NES, Edinburgh Central Office, Wiley Online Library on [24/08/2023]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License