

Individual investors and social ownership structures in the UK before the 1930s: Joint holdings and trustee investment

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Abstract. After the introduction of limited liability, a growing number of individuals in Britain from a widening social spectrum, including the less affluent, began to own stocks and shares. Drawing upon a unique and large dataset of 35,848 investors between 1870 and 1935, this study analyses joint holdings, which have been a neglected aspect of investor behaviour. Our findings reveal that joint holdings were quite common and that about one in five UK investors were involved in a joint investment. Men were more likely to be joint holders than women for reasons related to institutions of social ownership such as trusts and executorships.

In the wake of the Companies Acts of 1856 and 1862 and the introduction of limited liability, a striking change took place in the British shareholding population. A growing number of individuals from a widening social spectrum, including the less affluent, began to own stocks and shares. Gentlemen, solicitors, and peers of the realm were joined by ‘retailers, professional men, skilled workers and women’.¹ Despite the fact that a rough estimate would put the number of UK shareholders at less than 2.5 per cent of the UK total population at the start of the 20th century,² British investors formed a dynamic and inclusive social group that considerably transformed the British financial landscape.

There has been growing research interest in 19th and 20th century UK shareholders and their investment behaviour. Quite a few studies have taken advantage of shareholding records held in a variety of archives.³ For example, Acheson, Campbell, and Turner examined the shareholder registers between 1850 and 1900 of 293 companies registered in England, arguing that the largest providers of capital were men with no formal occupation who relied on investment income.⁴ Also, the study by Rutterford, Green, Maltby, and Owens, based on 261 share records of 47 different companies registered in England over the period 1870–1935, offered evidence that women became more important in terms of the number of shareholders and value of holdings over time.⁵ Freeman, Pearson, and Taylor, looking at women as a proportion of total shareholders and women’s investment as a percentage of subscribed capital for a sample of 198 UK companies between 1705 and 1886, documented the rise of women as investors but also noted considerable limitations on the extent to which

¹ Cairncross, *Home and foreign investment*, p. 85. See also, Robb, *White-collar crime*, p. 3; Rutterford and Sotiropoulos, ‘The rise’; Hannah, ‘Corporate governance’; Michie, *Stock Exchanges*; Cheffins, *Corporate Ownership*; Morgan and Thomas, *Stock Exchange*.

² Rutterford and Sotiropoulos, ‘The rise’.

³ As, for example, the BT31 series in The National Archives that includes companies such as Henry Tate and Sons or in corporate archives such as the National Gas Archive; see Rutterford et al., ‘Researching shareholding’.

⁴ Acheson et al., ‘Who financed’.

⁵ Rutterford et al., ‘Who comprised’. This evidence is also in Acheson et al., ‘Who financed’.

female shareholders could participate fully in the governance of joint stock companies.⁶ Acheson and Turner investigated shareholder records of Scottish banks in the nineteenth century to better understand individual investor behaviour in the early British capital market, arguing that investors exhibited a bias towards investing in banks that conducted business in the areas where they resided.⁷ Following on from this research, shareholder registers have also been used to analyse the social geography of British financial markets and to investigate local investment preferences in the late nineteenth and early twentieth centuries.⁸

The missing element in the above literature is that it does not distinguish between *shareholdings* and *shareholders*. British companies allowed more than one investor to hold shares jointly and provided details of the joint shareholders' names in their share registers. However, empirical research to date has typically treated the first-named or primary holder as sole owner, ignoring any co-owners of the holding. Research into British shareholders has thus for the most part ignored any joint holdings and the extent to which joint investment drove financial behaviour. A recent paper by Acheson, Campbell, Gallagher, and Turner is – to our knowledge – the first comprehensive study of shareholder characteristics that differentiates between solo holders *as well as* joint holders.⁹ Based on data compiled from railway address books between 1915 and 1922 for five of the largest British railway companies, the authors note that joint shareholdings were by no means uncommon.¹⁰ As many as 20 to 30 per cent of women investors and 60 to 70 per cent of male investors were involved in joint railway shareholdings. Their estimates also imply that women were much

⁶ Freeman, Pearson, and Taylor, 'Women shareholders'.

⁷ Acheson and Turner, 'Investor behaviour'.

⁸ Franks et al., 'Ownership', Rutterford et al., 'Local bias'.

⁹ Acheson et al., 'Independent women'.

¹⁰ The main results of Acheson et al., 'Independent women', that are relevant to our study will be reported in our analysis in Table 2 below. The sample of Acheson et al. includes six UK railways. The three Scottish ones (the North British, 1915; Caledonian, 1922; and Glasgow and South Western, 1921) only report solo shareholders, or the lead shareholder from a joint holding and they are grouped together for analysis by the authors. For the three English railways in the sample, data with regard to joint holders are discussed only for two of them: the London and North Western (1915) and North Eastern (1921) – see also Table 2.

more likely to be solo shareholders than men, with 70 to 80 per cent of women investing on their own compared to 30 to 40 per cent of men.¹¹ Acheson et al. conclude from their analysis that, as early as WWI, ‘women were exercising independence in their own financial affairs, taking full control of the risks and rewards of share ownership’.¹²

Joint financial investment remains an under-researched area. This study is a further contribution to this topic. We first analyse the importance of joint holdings using a dataset of 261 lists of shareholders of 47 companies, registered in England and Wales, compiled between 1870 and 1935, and comprising a total of 31,629 holdings, which amounts to 35,848 individual investors. This enables us to extend the Acheson et al. analysis beyond just railway companies between 1915 and 1922 by including more sectors, years, and security types. We then discuss possible reasons why joint holdings were popular with British investors.

Our findings show that a significant number of UK investors – about one in five, according to our calculations – were involved in joint holdings between 1870 and 1935. There is an overall tendency for joint holdings to fall slightly over time. We also find significant differences between the use of joint holdings by men and by women at a time when women comprised around a third of all investors.¹³ Our results show that women were more likely to hold shares on their own: 88 per cent of women in our sample were solo shareholders compared to 77 per cent of men. This finding supports the Acheson et al. evidence of proportionately more women being solo holders than men, with respect to railway companies from 1915 to 1922, but in our estimate the gap between women and men solo holders is smaller. We find that the gender gap in solo shareholding is not due to women seeking independence, rather it is due to the fact that men often acted as trustees or executors along with other men. As a result, we argue that, to better understand the investment

¹¹ For these results, see Table 1 and Table 7 in Acheson et al., ‘Independent women’.

¹² Acheson et al., *ibid.*, p. 22.

¹³ In our sample, 35% of solo holders and 32% of all holders were women.

behaviour of women, a full analysis of the financial landscape is required, including all available sectors and security types, to be able to account for the wider social institutions of ownership. We find that in sectors with a high ratio of trustee securities,¹⁴ such as the railways, women appeared as independent investors in higher proportions than men simply because some men were acting as financial intermediaries with other men for one or more unnamed third parties rather than as ultimate beneficiaries. What could at first glance be observed as independent investment behaviour by women, is in fact the latent effect of existing social institutions of ownership where men acted on behalf of others in a fiduciary role as well as being direct owners of shares.¹⁵

This study contributes to the above-mentioned discussion of the shareholder population and democratisation of finance in the wake of limited liability laws in the UK by shifting the emphasis from *shareholdings* to *shareholders*.¹⁶ This change in focus reveals important aspects of investor behaviour and ownership structures in the history of British financial markets. Despite the growing participation of women in financial markets,¹⁷ we find that gender differences in investment behaviour were also driven by socio-economic structures deeply rooted in UK society. Our analysis invites further discussion on the risk preferences of British investors. The shift from *shareholdings* to *shareholders* requires that one needs to consider financial wealth held not only by individuals but also on behalf of investors/beneficiaries by their trustees and/or executors.

¹⁴ We define trustee security to be a type of security authorised by the court of Chancery as a suitable investment for trust funds or permitted by legislation such as in the Trust Investment Act 1889, the Trustee Act 1893, Colonial Stock Act 1900, and the Trustee Act 1925 (see Stebbings, *The Private Trustee*, ch. 5; Geare, *The Investment*; Ripley, *A Short History*).

¹⁵ Trustees held shares ‘in trust’ and were the legal owners of the shares; hence their names appeared on the register. However, they held shares in trust for beneficiaries and so did not benefit financially from the holding. The same reasoning applies to executors. Acting in this way as trustee or executor can be seen as acting as a financial intermediary, holding shares for the ultimate beneficiaries.

¹⁶ The list of relevant studies is particularly long here. See for instance, Acheson et al, ‘Independent women’; Acheson and Turner, ‘Investor behaviour’; Freeman, Pearson, and Taylor, ‘Doe in the city’; Green and Owens, ‘Gentlewomanly capitalism?’; Rutterford et al. ‘Who comprised’, Rutterford and Sotiropoulos, ‘The rise’.

¹⁷ See for instance, Rutterford et al. ‘Who comprised’, Acheson and Turner, ‘Investor behaviour’; Freeman, Pearson, and Taylor, ‘Doe in the city’; Carlos, Maguire, and Neal, ‘Women in the city’.

The rest of this study is structured as follows. Section I describes our sample. Section II investigates the proportion of joint holders in different sectors and security types. Section III continues the analysis looking into reasons why investors chose a joint holding. Section IV discusses joint holdings in relation to trustee securities, revealing the main reasons for the difference in the investment behaviour between men and women. Section V provides a multiple regression analysis of possible factors of joint holdings. Section VI summarizes the main findings of this study.

I

To study the patterns of individual share ownership and joint holdings, we use a dataset of 261 registers of shareholders of 47 companies, registered in England and Wales, compiled between 1870 and 1935.¹⁸ These 261 sampled registers led to 301 unique company-year-security lists (these are called ‘records sampled’ in Table 1).¹⁹ The registers were mostly derived from a company’s Form E²⁰ – an annual statement that companies registered in England and Wales were required to file under the Companies Acts 1856 and 1862. These Form Es are now held either at The National Archives or at Companies House and include a company’s authorised and issued share capital as well as a register of all shareholders at the

¹⁸ Our sample is based on data originally collected for the Economic and Social Research Council project: ‘Women investors in England and Wales, 1870-1930’ (award no. RES-000-23-1435).

¹⁹ Some of the shareholder registers contained the shareholders of more than one security, usually both the ordinary and the preference shares. Thus, one shareholder register in this case would produce two distinct shareholder lists or records (as they are called in Table 1).

²⁰ All but two registers, for Cunard shipping and the Bank of England, were taken from the Form E. Cunard does not appear in Table 1 and is not included in our main sample. Cunard share dealings were followed over time from 1880 to 1903 to track purchases and sales as part of a longitudinal sample. We use Cunard’s data to identify the proportion of executors in our analysis below, because they report this information.

year-end – including their name, address, occupation or marital status, and the value of the holding. They were required to be filed within 28 days of a company’s financial year end.²¹

Table 1 shows a summary of our sample, which spans nearly seven decades between the 1870s and the 1930s and comprises 31,629 shareholdings. The company records were randomly collected and sampled to reflect the range of options open to the potential investor, in order to enable us to examine the factors that affected investors’ choices.²² Companies were sampled from seven sectors using a disproportionate stratified random sample, selecting a more or less equal number of companies per sector irrespective of each sector’s relative size. Otherwise, given their dominance on the London Stock Exchange, the majority of the sample would have been drawn from railway companies and government securities. In addition, as the relative importance of sectors changed significantly over the 65 years, this was taken into consideration in our sampling approach. The resulting sample represents the variety of investment opportunities available in terms of industry sectors, sizes (both in terms of issued nominal capital and of number of shareholders), longevity, type of securities available (ordinary, preference, bonds), and status of companies (private/public).²³ Emphasis was also put on the geographical variation of the companies, securing a regional mix of operations in England and Wales as well as a mix of domestic, foreign and empire operations. Our sample includes, where available, one Form E per decade for each company, preferably taken at the start of the decade.²⁴ For eight of the companies the full range from the 1870s to the 1930s was available. However, in order to include a mix of long-established sectors and sectors – some of which, such as the automotive and oil industries, only emerged towards the

²¹ Publicly accessible shareholder lists were mandated as early as 1845 by the Companies Clauses Consolidation Act which covered most UK statutory and chartered companies – primarily railway companies and other public utilities. See Foreman-Peck and Hannah, ‘Corporate Governance’.

²² See also Rutterford et al., ‘Researching shareholding’.

²³ Our sample includes 151 publicly listed securities, 10 privately listed securities, 140 private and unlisted securities, and one unlisted public security.

²⁴ Where there was a choice of record, years ending 1, 2 or 3 (for example 1891) were preferred to later years in the decade, in order to maximize the possibility of linking individual shareholders to Census enumerators’ books, and thereby to explore the social and economic characteristics of individuals in more detail.

end of our period – for the majority of companies we have a shorter date range. Equally important to the wider spread of years and sectors, we also aimed to include companies with more than one security type, in order to be able to look at investor strategies to risk.

[TABLE 1 NEAR HERE]

Full coverage of all shareholdings for the firms and years in Table 1 was not feasible, as the growth of shareholding over the course of the period meant that the registers grew increasingly large over time. Particularly by the 1920s and 1930s some of the larger companies in our sample, such as Barclays and Anglo-Persian Oil, had shareholder registers of over 30,000 holders.²⁵ To be able to cover a wide range of formats of company registers, the shareholdings in each register were sampled using random letter cluster sampling. Most of our share registers were in letter order but not alphabetic order within that letter. We chose three letters randomly for each share register in order to eliminate family or geographic region bias. New shareholders were either distributed throughout a letter or added at the end, so in order to eliminate bias to long-standing investors we randomly picked a starting point within a letter.²⁶ This resulted in samples of between 50 and 195 shareholdings per share record. Table 1 shows the number of shareholdings that were sampled per company and an approximation of the investor population to which the sampling corresponds.²⁷

Table 2 compares the geographical breakdown of the investors in our sample with a similar breakdown based on 1941 share records by Ellinger and Carter for the *Financial Times*.²⁸ Both our sample as a whole, and the 1930s records only, which represents the

²⁵ See also Rutterford et al., ‘Local bias’.

²⁶ A more detailed description of the sampling method chosen can be found in Rutterford et al., ‘Researching shareholding’, pp. 11-19 and idem., ‘Who comprised’.

²⁷ Op. cit.

²⁸ Ellinger and Carter, ‘How many investors’, p. 6.

nearest reference point to the 1941 study, show that our shareholders are distributed in line with Ellinger's and Carter's results, which is some evidence that our sample is representative of the distribution of shareholders at the time.

[TABLE 2 NEAR HERE]

The unique element of this study's dataset in relation to the great majority of previous research²⁹ is that it allows us to distinguish between *shareholdings* and *shareholders*. In the case of joint holdings, previous research based on shareholder records has treated the first-named holder as sole owner. In our study we were able to identify the great majority of joint holders for the shareholdings we sampled. As we can see from Table 1, this provides 4,219 additional named shareholders to the 31,629 first-named shareholders. Analysis based only on first-named investors would thus leave out about 12 per cent of total shareholders.³⁰ Joint holdings could involve more than two investors so that, in our case, the 4,219 additional shareholders corresponded to 3,344 joint shareholdings of the total 31,629 shareholdings, which is equal to about 11 per cent of total shareholdings³¹ (this result is not reported in Table 1).³²

²⁹ As we mentioned in the introduction, the study of Acheson et al., 'Independent women', is the only exception.

³⁰ This is equal to $4,219 / (31,629 + 4,219) \approx 12\%$.

³¹ This is equal to $3,344 / 31,629 \approx 11\%$.

³² Of the 301 share records in our sample, 249 contain joint holders. Of those, 164 records have complete information about all joint holders; 12 records have information for over 90% of the joint holders; 25 records have information for between 30% and 90% of joint holders; 4 records have information for less than 30% of joint holders; and 44 records do not provide any information about joint holders. Lack of information about joint holders means that secondary joint holders were described as 'and (an)other(s)', and lacked data on name or sex. The registers without information were distributed throughout the sample; for every company except Foreign and Colonial we had at least one year in which information on the joint holders was known. We assume that the years without information are comparable to the years with full information. In our analysis, unknown secondary holders have been ignored, which leads to 3,599 identifiable secondary holders. In our background analysis, we have replicated all our calculations and estimates based on the 71% of the share records that contain full information about the joint holders and our results are the same.

II

Even though we estimate that about 11 per cent of total shareholdings in our sample were joint holdings, the role and importance of joint shareholdings is an under-researched area in economic history. Being a solo or a joint holder had different implications for the investor, and these differences may reveal important aspects of investor behaviour. Solo holders investing on their own had control of all the rights to dividends, capital gains, company notifications, and votes relating to the shares they held. In such a case, the shareholding can be viewed as equivalent to the shareholder. Joint holders, on the other hand, created a mismatch between the number of shareholdings and the number of shareholders. The sequence of shareholders' names in the record indicates a *primary* joint shareholder followed by one or more *secondary* joint shareholders. This distinction was not neutral as: (i) the right to receive notifications and accounts from the company, (ii) the right to appoint proxies or vote, and (iii) the right to receive dividends were all attributed only to the first named owner.³³

Table 3 reports the proportions of the 35,228³⁴ solo and joint holders in our full sample and in the railway records. According to panel (a), about one in five investors (19.7 per cent) were involved in a joint holding. This percentage declined steadily over time from 25 per cent in the early decades to just under 20 per cent by the 1920s.³⁵ Our findings agree with the Acheson et al. analysis: joint holdings were by no means a marginal phenomenon in

³³ See clauses 1, 46 and 96 of Schedule A model articles of association in the Companies Act. Companies did not have to mirror these proposed articles and some companies were happy, for example, to pay the dividend pro rata to the joint shareholders.

³⁴ As we can see at the end of Table 1, the total number of shareholders in our sample is equal to 31,629 shareholdings of solo or primary joint holders plus 4,219 additional shareholders involved in joint holdings as secondary holders; this gives a total of 35,848. We excluded from our analysis 620 of these additional investors (evenly distributed between different records) for whom we were not able to identify the gender. This brings the number of total shareholders in Table 2 to 35,228.

³⁵ The split of the period between before and after 1900 is somewhat arbitrary but gives a sense of change over time. Our findings do not depend on the break point.

the UK financial markets during the Victorian and Edwardian period. This finding also has implications for almost all existing studies that have assumed that “shareholdings” were equivalent to “shareholders” and have failed to consider why British investors in some cases preferred joint rather than solo holdings.

[TABLE 3 NEAR HERE]

Panel (b) of Table 3 compares the results of Acheson et al.’s study with our results for the shareholders of the London, Brighton and South Coast railway; this is the only UK railway company in our sample comparable to the railway companies in Acheson et al.³⁶ The only other UK railway company in our sample, the Sheffield District Railway, was a small, local railway, and thus not comparable with the large UK railway companies in Acheson et al. For the same reason, for the calculations of panel (b), we excluded holdings in railway fixed interest securities so that our results are also directly comparable to those of Acheson et al.

In our sample, we find that women investors were much more likely to be solo shareholders than men in our large railway company. About 73 per cent of women investors in London, Brighton and South Coast Railway were solo holders compared to 46 per cent of men. Acheson et al. report quite similar results for their railways.³⁷ The North Eastern railway in 1921 had 79 per cent of women investors as solo holders compared to 40 per cent of men. Similarly, the London and North Western railway in 1915 had 74 per cent of women

³⁶ Table 3 offers an overview of how our sample compares with the sample of Acheson et al., ‘Independent women’. The latter sampled all shareholders of six of the largest UK railway companies between 1915 and 1922; although their discussion about joint holders was based on five of them. This produced a comprehensive dataset of 345,342 shareholders, albeit limited to a specific sector at a specific period in time and including both ordinary and preferred shares without being able to distinguish between them. On the other hand, the dataset in our study, based on a random letter cluster sampling (as explained above), generates a smaller overall sample of 35,858 shareholders but provides many additional factors for analysis, such as changes over time, across sectors, as well as between different security types.

³⁷ Acheson et al., ‘independent women’, p. 14.

investing as solo holders compared to 35 per cent of men. These results are also reported in panel (b) of Table 3. The gap between female and male solo holders was smaller for the three Scottish railways (Caledonian Railway in 1922; North British Railway in 1915; and Glasgow and South Western Railway in 1921) in Acheson et al.'s sample, with 86 per cent of women investors being single holders as opposed to 63 per cent of male investors. This smaller gap is comparable to the results for the ordinary and preferred shares of all the railway companies in our sample,³⁸ shown as a sector in Table 4 (we also excluded fixed interest securities in this calculation for comparison reasons). However, the gap is smaller still for all shareholders in our sample, as shown in panel (a) of Table 3. Women still have a higher probability of being solo shareholders than men, but the difference is now considerably smaller. For our full sample, 88 per cent of women were solo holders compared to 77 per cent of men. This gap of 11 per cent does not change over time when we compare pre-1900 with post-1900 shareholder records.³⁹

The differences between the results in panels (a) and (b) of Table 3 imply that the results for UK railway shares may be driven by other, as yet underlying factors and cannot be generalized as such to explain the overall behaviour of British investors. The UK railway shareholder address books investigated by Acheson et al. make an interesting case study having a very large number of investors for six selected companies in a sector that made up a significant percentage of stock market capitalization. For instance, in 1913, British railways comprised about 11 per cent of the securities listed on the London Stock Exchange in nominal terms.⁴⁰ However, their study is focused on a single sector over a specific period,

³⁸ These railways are: Argentine Great Western Railway, London, Brighton & South Coast Railway, Sheffield District Railway, and Southern Mahratta Railway Co.

³⁹ This result also does not change when we compare different decades in our sample.

⁴⁰ The percentage of nominal value figure falls to 7.6% in 1920 which is closer to the period examined by Acheson et al. These numbers are provided by the annual summaries of the *Stock Exchange Official Intelligence*. UK railways were typically large public companies and they constituted almost half of the 100 largest companies on the British stock market in 1911 – see also Foreman-Peck and Hannah, ‘Extreme divorce’ as well as Wardley, ‘Big business’. On the other hand, our sample includes firms of different sizes and offers a more representative picture of the investment options in British financial markets.

1915-1922, and, most importantly, it does not differentiate between ordinary and preferred shares, nor does it contain information on the size of each shareholding. To be able to compare results, we have applied the same constraints to our data for the London, Brighton and South Coast Railway by, in particular, not differentiating between ordinary and preferred stock with the results shown in panel (b) of Table 3. However, by doing so, we ignore the very different risk and return characteristics of ordinary and preferred shares and their relative attractions for male and female investors. Although, in some cases, preferred shares had voting rights, as did ordinary shares, they were always senior to ordinary shares and typically had a fixed rather than variable dividend payment. In addition, after the Trust Investment Act of 1889, trustees were legally allowed to invest in preferred shares of all British railway companies – provided that the railway company had paid an ordinary share dividend of at least 3 per cent over the previous two years.⁴¹ Railway ordinary shares, on the other hand, were never legally recognised as authorised trustee securities. Railway preferred shares may thus have appealed to a very different type of investor from the investor in ordinary shares or been part of different investment strategies related to trust portfolios. A complete analysis of solo and joint holdings therefore requires investigation of different security types as well as sectors. This is done in Tables 4 and 5.

⁴¹ See Geare, *The Investment*; Ellissen, *Trust Investments*; Keeton, *The Law*; Ripley, *A Short History*, p. 141, Anderson, 'Law, finance', p. 109-110; Stebbings, *The Private Trustee*, pp. 142-5. 'In its final form the Trust Investment Act 1889 achieved its primary objective of tidying the law and enlarging the range of permitted investments' (Stebbing, *ibid.*, pp. 142-3). The next Trustee Act in 1893 made sure that 'the railway in question had paid an ordinary dividend over the previous ten years; though at the same time it did extend the range of public utility and local authority investments' (Anderson, *ibid.*, p. 109). Low-risk colonial securities were added in 1900 (*Official Intelligence*, 1914, pp. 1698-1703). The status of a security as a legally recognised trustee investment was liable to change over time based on trust acts and the preconditions these acts raised. In our dataset, we were able to identify all trustee securities over time. The trustee acts determined the investment powers of the trustee where no explicit investment clauses existed. However, the law reflected the investment sphere in which trustees operated. Those trustees who were not limited to trustee securities were subject to the 'prudent man' rule which discouraged trustees from investing in non-trustee securities. (Stebbing, *ibid.*, pp. 12-14). It is worth noting here that Scottish trust law differs from that of England and Wales and the permitted investments were not identical in each country. See, for example, *Official Intelligence*, 1885, pp. lxxiii which refers to the Trust (Scotland) Amendment Act of 1884. We return to the discussion of money trusts in Section IV.

[TABLE 4 NEAR HERE]

Table 4 reveals different patterns of joint holdings between different sectors (when we group together different security types). Joint holders in agricultural, commercial, extractive, financial (the Bank of England is reported separately), and manufacturing companies fluctuate between 10 and 15 per cent of total holders, while there is a small gap between women and men solo shareholdings. Joint holders are higher in terms of importance in utility, railway, and transport and communication companies. The biggest difference between women and men solo holders appears in the railway sector, where the gap reaches 16 per cent (considering only ordinary and preferred shares), as well as over 45 per cent for Bank of England stock (the latter regarded as almost a risk-free investment).⁴² As far as security types are concerned in Table 5 panel (a), there is a marked difference between fixed interest securities and other types of security, with 60 per cent of fixed interest security holders being joint holders and the gap between women and men solo holders at almost 40 per cent. An equally revealing finding appears in panel (b) of Table 5, which presents the same calculations by designation (or not) of trustee status. The proportion of joint holdings as well as the gap between women and men solo holders is strikingly large for trustee securities. Our results for ordinary shares, preferred shares, and low risk non-trustee securities are quite similar, with joint holdings at the level of 15 per cent and a relatively small gap between women and men solo holdings. For trustee securities, almost 70 per cent of women were solo holders compared to only 23 per cent for men. This drives the total number of joint holdings to the level of 64 per cent for trustee securities.

⁴² The Bank of England was privately owned by stockholders from its foundation in 1694 until it was nationalised in 1946. Bank of England stock became a trustee security as early as the 1859 Law of Property and Trustees Relief Amendment Act (see Stebbings, *Private Trustee*, p. 136; Offer, *Property and Politics*, pp. 137-47). The gender difference in this case is due to the trustee status of Bank of England stock. We will return to this issue later in our discussion.

[TABLE 5 NEAR HERE]

Not being able to distinguish between ordinary and preferred railway shares (trustee securities after 1889⁴³) for the railway companies sampled by their study, Acheson et al. may have been unable to determine the main factor that drives the difference in importance of solo shareholdings between men and women: namely, the *trustee effect*. Put differently, if women preferred to act as independent investors more than men, this would not be conditional on the trustee status of the security (or any other possible factor that might affect joint-holdings). However, our calculations cast serious doubt on this assumption.⁴⁴ After the 1889 Act, railway preferred shares became a favoured investment option among trustees due in part to the poor financial performance of UK Government stock, causing ‘many solicitors and others acting as Trustees to invest heavily in this type of security during the next two decades’.⁴⁵ Blending trustee and non-trustee securities together disguises the joint holdings effects revealed by panel (b) of Table 5. Indeed, we find that there is a huge concentration of male joint holdings in trustee securities, which is most likely (as we discuss below) to be joint trustee positions. This gender differentiation in joint holdings mostly disappears in non-trustee securities. Therefore, when we mix trustee and non-trustee share records together,

⁴³ We return to the issue to trustee securities in Section IV.

⁴⁴ Acheson et al., ‘Independent women’, use the calculation of executors/trustees of the first named shareholder (in single or joint holdings) for the Scottish railway books to estimate executors and trustees in English railways under a plausible assumption. In their results, a higher weight of English female solo holders is still observable when they exclude the estimated executors and trustees. However, the distribution of trustees in registers which include both ordinary and preferred shares might not be the same when we take ordinary shares and preferred shares separately, an analysis that Acheson et al. are unable to make. One would expect the great majority of trustees to appear in trustee securities (which, in Acheson et al. sample, are the railway preferred shares, but not the railway ordinary shares). Our findings in Table 5 show that there is a huge concentration of male joint holdings in trustee securities, which is most likely to be trustee joint holdings. This gender differentiation in joint holdings disappears in non-trustee securities. If there was a propensity of women to become independent investors, this propensity would be the same in trustee and non-trustee securities (a calculation that Acheson et al. cannot offer on the basis of their sample). This is contrary to our results. We return to this issue in Section IV.

⁴⁵ See Ripley, *A Short History*, p. 142.

there is still a higher proportion of men in joint holdings compared to women, but this is the trustee security effect that survives and not the preference of women to become independent investors.

III

The results of the previous section raise two questions. First, why did one in five UK investors choose a joint investment in the Victorian and Edwardian period? Second, why was there a strong tendency for men, as compared to women, to become joint holders in trustee securities? The rest of our analysis attempts to address these questions discussing possible (additional) reasons for joint holdings. We begin with the first question.

For investors with sufficient financial means, it is rather unlikely that they became joint holders to share the investment risk. From a purely risk-return point of view, it makes no difference whether one owns an amount of a share as a solo holder or twice that amount as a joint holder. An effective risk management strategy would require portfolio diversification, and UK investors were well-aware of the benefits of such diversification and also had the option of buying investment trust shares.⁴⁶

Of course, for the less wealthy, joint investments could make high denomination securities more affordable. Given that there was a large wealth gap between male and female investors,⁴⁷ if this explanation were correct, one would expect fewer women as solo holders, which is the opposite of our findings as shown in Table 3. Table 6 shows the proportion of solo and joint holdings by different security denomination bands. We define low denomination securities as those with nominal value equal to or lower than £10 and high

⁴⁶ For a discussion about diversification before modern portfolio theory see Sotiropoulos and Rutterford, 'Individual investors'; Goetzmann and Ukhov, 'British investment'.

⁴⁷ See for instance Rutterford et al., 'Who comprised' and Rutterford and Sotiropoulos, 'Portfolio diversification'.

denomination securities those with nominal value higher than £10.⁴⁸ Stock securities are reported as a separate category, depending on whether they were trustee securities or not.⁴⁹ It is clear from the first two categories of Table 6 that the level of share denomination was not a major factor encouraging investors to combine their funds in a joint holding.⁵⁰ The proportion of women joint holders remains at the same level for non-trustee stock. The gender difference in joint holdings becomes particularly large in trustee stock, which was also the main effect in Table 5.

[TABLE 6 NEAR HERE]

Table 7 reports the average amount invested by the shareholders in our sample by security type.⁵¹ The average investment was £718 (that is, £714.6 for solo holders, £747.5 for primary joint holders, and £744.7 for secondary joint holders), which is additional evidence that joint holdings were not necessary for investors to be able to participate in the stock exchange: those who could on average invest as much as £718 in a single holding had enough means to be solo investors.⁵² Men overall had significantly higher value holdings than women. The average value of solo holdings was slightly higher but not very different from

⁴⁸ The choice of the threshold of £10 in Table 6 is the median denomination value. The results do not depend on this threshold. It is certain that the denomination value of the securities deviated from the market price at which each individual investor bought their holding (but this variation would remain at the same level as the denomination value for most securities). While we cannot possibly know the market price at purchase, we can still repeat the calculations of Table 6 for the market price at the sampling year. We were able to find the market price at the sampling years for securities that amount to 22,020 investors in our sample and the results we get are very similar to those in Table 6.

⁴⁹ The word 'stock' was initially associated with fixed interest rate securities, issued by governments where the denomination was £100. In the period we investigate, stock securities did not have to pay fixed interest/dividends and their denomination could be as low as £1; however, most were priced per £100 nominal value but could be traded in smaller amounts than £100 (Ripley, *A Short History*, p. 73).

⁵⁰ This difference between women and men solo holders does not change when we use other share denomination thresholds.

⁵¹ The sample of Acheson et al., 'Independent women', does not have information about the amount invested by the shareholders.

⁵² As we would expect, the distribution of the value of holdings is quite skewed, with median value £130, minimum value £0.05, and maximum value £250,000 (10% quantile = £18.75 and 90% quantile = £1000). The median value is still enough for solo investment.

the assumed average value of joint holdings by security type, gender, and role (primary versus secondary holder). It seems that joint holdings represented on average the same investment per individual as the solo holdings. Another interesting finding in Table 7 is that wealthier investors (to the extent that the value of average nominal investment reflects underlying wealth) were more risk averse (higher average investment in fixed interest securities) and were more likely to have their investments held in trust (higher average investment in trustee securities held on behalf of beneficiaries⁵³). This applies to both men and women and is consistent with the results obtained by Rutterford and Sotiropoulos from a probate sample of total wealth at death of just over 500 individuals between 1870 and 1902.⁵⁴

[TABLE 7 NEAR HERE]

The fact that the average investment was by and large the same between solo and joint holdings per investor implies that joint holdings were not special investment vehicles for those with lower financial means but rather served other socio-economic purposes. In this regard, the remaining reasons for joint holdings fall broadly into three categories: (i) familial ties, (ii) executors, and (iii) trustees – although there may be some overlapping between these categories. The first two categories can offer an answer to the question of why investors were involved in joint holdings in general and explain possible gender differences. However, it is only the third category that can describe the gender difference in joint holdings of trustee securities as shown in panel (b) of Table 5.

As a first category, familial ties could potentially explain joint ownership. Some married couples might prefer to be joint holders of their financial property. The same might

⁵³ These wealthy investors would probably be beneficiaries in trusts and would not appear as owners.

⁵⁴ Rutterford and Sotiropoulos, 'Portfolio diversification'; Rutterford et al., 'Local bias'.

apply to parents and their children or even sons and daughters in law. Table 8 examines possible familial ties amongst joint holders. Familial ties are not revealed as such in the share records (with very few exceptions) but are assumed in our analysis when joint holders carry the same surname.⁵⁵ According to our results, familial ties account for only a small fraction of total holdings, while there are no significant differences when women or men act as primary holders with family members. Only 3.9 per cent of women primary holders were involved in family joint holdings as a proportion of all female solo and primary shareholders (2.6 per cent with related male and 1.3 per cent with related female). For male primary shareholders the figure is almost the same: 3.8 per cent as a proportion of all male solo and primary shareholders (0.4 per cent with known spouse, 0.7 per cent with related female, and 2.7 per cent with related male).

[TABLE 8 NEAR HERE]

It is not easy to disentangle all possible familial ties underlying the shareholdings of Table 8, but we are able to make some plausible guesses. Some companies provided more information than others in their records. For example, those listed as spouses in Table 8 were so identified by the company in the Form E. In 183 of our 301 records sampled, additional addresses for the secondary holders were provided. While in many cases the lack of detail prevents us from confirming whether they lived at the same address as the primary holder or merely in the same town, addresses in larger towns were more likely to be given as house number – street – city. This offers further hints for possible relationships. For instance, of the 2.6 per cent of women who were primary shareholders with a related male, those who were

⁵⁵ This is the approach used by Acheson et al., ‘Independent women’, to investigate familial ties. Of course, the assumption of the same surname will not pick up every family connection but provides a good approximation.

married lived in almost all cases at the same address, whereas widowed primary holder women with secondary holder males with the same surname tended to provide a different address. Single women were most likely to invest with other single women with the same surname. Where addresses were available, they often provided the same address, and were almost certainly sisters with a joint investment. Just over a quarter of joint holdings had more than one secondary holder, and only a handful were groups of over four investors. The more investors involved in the holding, the more likely it was that it was an all-male group. An exception was Arabella Kirkpatrick of Edinburgh, who held a joint holding in the Bank of England with three other single Kirkpatrick women living at the same address. She was also a joint holder in another holding of Bank of England stock, this time with three men. Her two holdings hint at some of the different reasons for having a joint holding; one may have been inherited from her family – another set up as a trust (in that case she would not be the beneficiary). A significant proportion of joint holdings in Table 8 were not linked to familial ties. This leads us to the other two possible explanations for joint holdings: executors and trustees.

Unfortunately, in many cases in our dataset information about executors was not complete.⁵⁶ Executors were clearly not long-term shareholders but, each year, we would expect a certain number of executors among shareholders. To get a sense of the importance of executors and how this may have affected joint holdings, we worked with a reduced sample of 109 of our records in which at least one shareholder was identified as an executor, on the assumption that these companies recorded all their executor holdings that year. According to these data, both women and men could appear as executors in solo and joint holdings. In this

⁵⁶ The model articles of association in Table A of the 1862 Companies Act sections 12 to 16 recognise the executors or administrators of a deceased shareholder as the only persons recognised by the company as having any title to the share and '[m]ay be registered as a Member' or may elect some other person (a nominee) to be a member. This recognition also included the survivor(s) in the event of shares held jointly. See for example, clause 21 of Table A of the 1908 Companies Consolidation Act. Those wishing to be registered had to provide sufficient evidence to the company.

sample, 6 per cent of holdings were held by executors. It was more likely for an executor to be a woman (7 per cent of all women in the reduced sample compared with 5 per cent of all men) and these women were twice as likely to be widows as non-executor women, meaning that it is likely they held the shares as executor of the will of their late husband. Over 40 per cent of executors had a joint holding, indicating the importance of joint holdings for executors and, in particular, of male executors, for whom the percentage of joint holdings was almost 50 per cent (as opposed to 35 per cent for women). Over half the joint holdings of executor women were with someone related to them, as opposed to only a third of male executors' joint holdings. However, as it is uncertain whether this reduced sample captures all executors, we also studied a unique dataset of shareholders of the Cunard shipping company, whose share transfers were followed over the period 1880-1903, to provide a longitudinal sample.⁵⁷ It appears that, during this period, as many as 10 per cent of all investors in the Cunard sample were executors, which is slightly higher than our estimate above. Again, it was more likely for women to appear as executors (about 20 per cent of the total of female investors) compared to men (about 8 per cent of total male investors). However, about 75 per cent of male executors were joint holders and only 50 per cent of female executors. To the extent that these calculations are accurate and generalizable to our full sample, it seems that about 10 per cent of women solo holders were executors as opposed to 2 per cent of male solo investors. This may well help to explain the gap of 7 per cent between men (82.8 per cent) and women (89.7 per cent) solo investors in non-trustee securities, in panel (b) of Table 5.⁵⁸

⁵⁷ See footnote 20 as well as Rutterford et al., 'Researching shareholding'.

⁵⁸ The lack of availability of information on trustees and executors in English address books led Acheson et al., 'Independent women', to use Scottish data for an estimate. Scottish railway books were poor at reporting marital or occupational status but gave more complete information about primary holders' status as executors or trustees. Acheson et al. report the combined figure for trustees and executors for solo and lead joint holders of the three Scottish railways in their sample. Hence, we cannot compare our results for executors with theirs. Instead, we looked at the share records of three Canadian banks: the Merchants' Bank of Canada in 1883, the

The above estimates imply that about 10 per cent of female and 6 per cent of male investors were involved in joint holdings as executors. Some familial ties in Table 8 might represent people acting in this capacity. For instance, one would expect that some widows with adult children acting as executors after the death of the husband would appear among the 1.3 per cent of female primary holders with related female secondary holders or the 2.6 per cent of female primary holders with related males as secondary holders, as shown in the top panel of Table 8.

However, the striking finding of Table 8 comes from the comparison of the second and third columns that report the joint shareholdings for both trustee and non-trustee securities by gender. To the extent that the executors and familial ties are equally distributed between trustee and non-trustee securities, the substantial gender differences joint holdings must be due to the holdings of trustees.

IV

Our analysis so far has not discussed the findings of Table 8 with regard to the gender difference of ownership patterns between trustee and non-trustee securities. Since the great majority of trusts in the period covered by our dataset had more than one trustee, usually men

Bank of Montreal in 1915, and the Bank of Hamilton in 1915. The shareholder lists of chartered Canadian companies are accessible at: <https://archive.org/search.php?query=%28list%20of%20shareholders%29> (Accessed on 29th October 2021). Four pages of shareholder names were randomly sourced for each of the three banks. Executors represented on average 4.1% and 5.8% for Merchants' Bank and the Bank of Hamilton respectively. The Bank of Montreal had no executors in the share register as, under Quebec law, based on civil law, the estate passes through to the beneficiary with no recognition of an intermediary. This is also reflected in trustee numbers. Merchants' Bank had 10.6% of shareholdings held by trustees (13.8% if tutors and curators are included) and the Bank of Hamilton had 8.8%. The higher figure for Merchants' Bank can perhaps be explained by the fact that the Married Women's Property Act – reducing the need for marriage settlements – was passed in Canada in 1900, after the date of the Merchants' Bank register and before that of the Bank of Hamilton. The MWPA (Scotland) was only passed in 1920 and the address books for the three Scottish Railways sampled by Acheson et al. were 1915, 1921 and 1922.

and very rarely women,⁵⁹ the third and perhaps the most important category of joint shareholders is likely to be men acting in the capacity of trustee.

The concept of assets held in trust by trustees for named beneficiaries has a long history, dating back to the Crusades.⁶⁰ Originally linked solely to wealthy landowners, by the end of the nineteenth century trusts were used by those with other forms of wealth derived from commercial and industrial interests, placing financial assets rather than property in so-called money trusts. Indeed, Victorian England saw the widespread adoption of money trusts by the emerging middle classes, and even the upper working class.⁶¹ By 1895 it was believed that as much as one-tenth of the property in Great Britain was held in trust,⁶² some arguing that the trust ‘seems to us almost essential to civilization’.⁶³ This estimate is not far from the proportion invested in non-familial joint holdings in our sample.

It is likely, therefore, that investors in our sample would have been familiar with trusts and their many uses. Trusts served a range of social functions. They provided a home for accumulated wealth by paying out only income (dividends or interest payments) and protecting capital. They thus offered a vehicle for family provision to support family members – such as widows and orphans. They provided the means to transfer family wealth across the generations as well as enabled married women to have access to pin money and a widow’s jointure before the Married Women’s Property Acts of 1870 and 1882 and the shamefully late Married Women’s Property Act (Scotland) of 1920. Before these Acts, women under common law had no legal entity separate from that of their husband.⁶⁴

⁵⁹ For this issue see Stebbings, *Private Trustee*, pp. 98-9.

⁶⁰ See Anderson, ‘Law, Finance’, p. 100; Stebbings, *Private Trustee*.

⁶¹ Stebbings, *Private Trustee*, p. 6.

⁶² These estimates come from the ‘Minutes of evidence taken before the Select Committee on Trust Administration’ in the *House of Commons Parliamentary Papers* in 1895, see Stebbings, *Private Trustee*, p. 5.

⁶³ Maitland, *Equity*, p. 23.

⁶⁴ The early summary and analysis by Greare, *The Investment*, of several legal rulings with regard to Trustee Acts offer a comprehensive framework for the social function of trusts. Marriage settlement trusts, for example, enabled women to have financial property, even when this was not allowed by common law, and protected this property against reckless husband behaviour.

Trustees were in high demand. During the period we investigate, ‘most men of a certain social and professional status either were trustees or had been asked to act as such’.⁶⁵ It was a thankless task: the trustee undertook – for no remuneration – responsibility for the financial security of the beneficiaries. Given the arduous task of trusteeship and the not unusual implicit threat of legal action if losses were incurred or fraud suspected, risk of this happening was reduced in a number of ways. Family members, preferably with some legal or financial expertise, were the trustees of choice. The most common number of trustees was two, with one trustee deemed to have too much power to defraud, and three or more trustees hard to find and at risk of internal disagreement.⁶⁶ Also, trustees could reduce the risk of being sued for poor investment performance by limiting the investments they made, on the beneficiaries’ behalf, to low-risk securities, such as trustee securities, even when the trust deed did not limit the trustees to such a strategy.

With trustees having legal ownership of the assets held in trust, they were required either to invest in authorised trustee securities or, if given wider powers of investment, to manage the investments as if they were their own property, as a ‘reasonably prudent man of business’ might do.⁶⁷ In order to protect beneficiaries, who were entitled to income from the trust, as well as those who would inherit the remainder, the Court of Chancery maintained a list of authorised investments in which trustees could invest without fear of being accused of taking too much risk – known as trustee securities. At the same time, a succession of Trust Acts detailed those securities which the law considered suitable for trusts. The two lists were merged, and new securities added, in the Trust Investment act of 1889, to resolve the problem

⁶⁵ Stebbings, *Private Trustee*, p. 14.

⁶⁶ There were no legal constraints on the number of trustees ‘though in practice there was an upper limit of four where Government stock was to be held in trust’ (Stebbing, *Private Trustee*, p.98.) The legal cases described by Geare, *The Investment*, highlight the main reasons for preferring a group of trustees: ‘continuity, security and the sharing of the burden of the administration’ (Stebbing, *ibid.*)

⁶⁷ This performance benchmark was settled in the leading case of *Re Whiteley* (1886) 33 Ch D 347 (see Stebbings, *Private trustee*, pp. 153-4).

of lack of securities given that the least risky trustee securities – UK government bonds – were in short supply.⁶⁸ This paucity of supply was created by the government redeeming more debt than it issued; the Court of Chancery using government bonds for the trusts under its own control; and government bonds being acquired as reserves by savings banks, all these factors leading to very low yields on offer. The enlarged list included preferred stocks of railways as well as debentures, provided the ordinary shares had paid a dividend of not less than 3 per cent for the last ten years.⁶⁹ Resistance to adding low-risk colonial stocks was due to the fact that these were more vulnerable to fraud as sold in bearer form, but they were added to the list in the Colonial Stock Act of 1900. However, some trust deeds allowed for a broader range of securities than did the legislation by including an express investment clause.⁷⁰ The trustee securities in our sample are indicated in the last column of Table 1. These include the stock of the Bank of England,⁷¹ the debenture stock of the London, Brighton & South Coast Railway, and the stock of the Southern Mahratta Railway after 1902. The preferred shares of the London, Brighton & South Coast Railway were also trustee securities.

Trustees, under common law, were deemed the owners of the securities included in trust funds, not the beneficiaries. English law was clear on whose names should go on the share register: those of the trustees. But such holdings were *not* to be identified on the share register as being securities held in trust. As section Nineteen of the 1856 Joint Stock Companies Act stated: ‘No Notice of any Trust, express or implied or constructive, shall be

⁶⁸ The investment powers defined by the state did not confine every trust, but it is a good indicator of the investment options for the majority of them. For a discussion of this issue see Ripley, *Short History*, pp. 141-9; Ellissen, *Trust Investments*. The conservative nature of trustee securities was a standard theme of critique by financial advisers who favoured diversification of higher risk, and hence return, securities, especially around the turn of the century, after the poor performance of government bonds. See Lowenfeld, *Investment*, pp. 129-35.

⁶⁹ The Act also allowed for changes in the portfolio of assets. Stebbings, *Private Trustee*, p. 144; Ripley, *A Short History*, pp. 141-9.

⁷⁰ Stebbings, *Private Trustee*, pp. 146-7.

⁷¹ The Bank of England stock permitted as trustee security in the Law of Property and Trustees Relief Amendment Act 1859, 22 & 23 Vict. c. 35.

entered on the Register or receivable by the Company'.⁷² As Neale explained, in a pamphlet offering a model memorandum and articles of association in 1860, 'the object of this provision is to prevent any question as to the persons entitled to vote, or deal with the shares or stock, or as to the persons liable to contribute if the Company should be wound up. It does not prevent shares being held by one person in trust for another, but this trust must not be stated on the register'.⁷³ This legal requirement has made – and still does make – it impossible to directly identify in an English share register who is a trustee and who is not.

This was not the case, however, for Scottish companies, which were explicitly excluded from applying the prohibition laid out in the 1856 Companies Act: For example, Scottish banks were excluded in the Joint Stock Banking Act of 1857: 'The Nineteenth Section of the Joint Stock Companies Act, 1856, shall not apply to any Banking Company in Scotland registered under this Act'.⁷⁴ The law concerning Scottish trusts, albeit with an equally long history, derived from the civil law tradition whereas English trust law followed common law principles.⁷⁵ It was not just Scotland; Quebec and many states of the USA 'recognise the possibility of a trust and do not compel the company to abstain from dealing with a trustee or nominee'.⁷⁶

⁷² 19 & 20 Vict. c.49, s. XIX Companies act 1856, aka 19 & 20 vict. c.47 s.XIX

⁷³ Neale, *Co-operation Handbook*, p.12.

⁷⁴ Joint Stock Banking Act 1857, 20 & 21 vict. C.49, s.XV.

⁷⁵ See, for example, Macdonald, 'Scottish trusts'. For a more in-depth discussion, see also discussion paper on the nature and constitution of Scottish trusts, published by the Scottish Law Commission, Discussion Paper 133, October 2006, Edinburgh. However, it was not unheard of in the Form E's of English companies for investors to be identified as trustees. For instance, Acheson et al., 'Shareholder clienteles', report that 0.7 per cent of investors were executors/trustees in their pre-1900 sample of shareholders. This number is significantly lower than the figure of executors and trustees for the Scottish railways between 1915-1922 provided by Acheson et al., 'Independent women', which was 17.2 per cent for men and 11.3 per cent of women investors. According to the authors, Scottish railway books gave more complete information about primary holders' status as executors or trustees. This is because, as we explained, the 1856 Joint Stock Companies Act explicitly demanded that the trustee status of the shareholder *not* be stated on the register whereas Scottish companies were explicitly excluded from applying this prohibition. Therefore, despite the fact that very few shareholders were indicated as trustees in our sample, this information is not accurate as a measure of the importance of trustees: the great majority of trustees were not described as such.

⁷⁶ Levy, *Corporations*, p. 307. This explains the availability of information on trustee holdings on Scottish railway registers, as found by Acheson et al., 'Independent women', and also on Canadian share registers (see footnote 58).

However, since trusts are likely to have two or more trustees, it is by studying the joint holdings of share records that we can attempt to determine whether there were, indeed, as in the Scottish companies, a number of trustees holding shares. We do this by exploring the importance of unrelated males in the joint holdings, as shown in Table 8.

The most striking finding in Table 8 is that about 60 per cent of male primary shareholders in trustee securities (as the proportion of all solo and primary holders in trustee securities) in the second column of the bottom panel were joint holders with an unrelated male. This effect cannot be due to joint risk sharing schemes as it disappears in non-trustee securities. It also cannot be due to men in the professions acting as executors because, again, the effect would have been the same in non-trustee investments. It is thus most likely that this effect reflects shared trustee roles. Information on the occupation status of the investors in our dataset is not very precise, with many male investors' occupations simply described as 'gentleman' or 'Esq.'. However, our background analysis implies that in these unrelated male investor groups in trustee securities, both the lead and the secondary investors were composed of 60 per cent 'status' occupational titles such as landowners, aristocratic titles, or were recorded as gentlemen; 20 per cent comprised several categories of professionals, including doctors, engineers, clergy men, teachers and most importantly solicitors (5 per cent); 4 per cent were men with army titles; and 6 per cent were merchants and dealers. All these professions were typical candidates for the role of trustee.⁷⁷

The findings in Table 8 allow us to decipher the results in Table 5. The latter show a small difference between men (83 per cent) and women (90 per cent) solo holders in non-trustee securities, which can be explained by the fact that women served in relatively higher proportions than men as solo executors (see previous section). The huge gap between men (23 per cent) and women (69 per cent) solo holders in trustee securities is simply explained

⁷⁷ See Stebbings, *Private Trustee*.

by the fact that it was mostly (unrelated) men sharing the role of trustee. When we blend together all securities in our dataset, the trustee effect in Table 8 implies that women will appear as solo holder in relatively higher proportions than men – but the gap is now much smaller than the gender gap of solo holdings in trustee securities. In particular sectors, the existence of trustee securities provides a smaller or larger gap between women and men solo holdings. In sectors like railways, in which both preferred shares and debentures typically qualified for trustee investment, the gap between women and men solo holders is larger. This by no means implies that female investors preferred to act independently; rather, it reflects the effects of social ownership structures with very deep roots in Victorian and Edwardian society.

V

Our analysis so far has identified some clear two-variable relationships in joint holdings. This section investigates whether our main findings survive in a multiple regression analysis and examines some additional factors that many affect investors' decisions as to joint holdings. To measure the effects on joint holdings, we estimate the following logit regression model as our baseline model:

$$\log\left(\frac{P_i}{1-P_i}\right) = \alpha_0 + \alpha_1 \cdot \text{female investor}_i + \alpha_2 \cdot \text{trustee security}_i + \alpha_3 \cdot (\text{female investor}_i \times \text{trustee security}_i) + \beta \cdot \mathbf{X}_i + u_i \quad (1)$$

The variable of interest in our analysis is dichotomous taking the value 1, if the individual investor i is involved in a joint holding, and 0 otherwise. In other words, the question is what made investors choose a joint financial ownership. This reflects to the probability P_i of

investor i participating in a joint holding. In the standard logistic approach we follow in equation (1), the dependent variable is the logarithm of the odds of investor i being a joint holder. *Female investor* is a binary variable that takes the value 1 if the investor is a woman and 0 otherwise. In a similar dichotomous fashion, *trustee security* is also a binary variable that indicates if the investor holds a trustee security or not. The vector X contains some additional explanatory variables. Table 9 reports the regression results and Appendix Table 1 offers a definition of the variables that appear in Table 9.

[TABLE 9 NEAR HERE]

Specification (6) in Table 9 is our baseline regression model, which captures the main finding of this study. The continuous variables in vector X are not available for the same number of observations in our sample. Specifications (7), (8), and (9) are complementary to (6), with more explanatory variables but fewer observations. Specifications (1) to (5) estimate the effects of some additional binary variables, which do not challenge our main findings. The first two specifications include the *female investor* and the *trustee security* variables separately, while specifications (3) to (5) test whether the proximity of an investor's residence to company's registered headquarters, or to the nearest stock exchange on which the security was listed, play any role in the holding patterns we have identified so far. The logistic regression model has been established to overcome the estimation problems of the linear probability model, but this comes with the cost that the interpretation of the coefficients is totally different from that of the regular OLS estimation. In the probability scale, all effects are non-linear, and their interpretation is by no means straightforward. To simplify our discussion, we have prepared Figure 1 that shows the effects of the binary

variables of the first six specifications of Table 9 in the probability scale, when the remaining independent variables in vector X take their mean values.

[FIGURE 1 NEAR HERE]

Despite the fact that almost all the effects shown in Figure 1 are statistically significant at the level of 5 per cent, the results offer a very similar picture to our bivariate analysis in the above sections. Female investors are less likely to be involved in joint holdings than men (specification 1), but this is because men are far more likely to become joint holders (trustees) in trustee securities (specification 6). The probabilities in Figure 1 are very close to the results of panel (b) in Table 5. About 75 per cent of men with investment in trustee securities were involved in joint holdings. This probability falls to 29 per cent in women investors. Men are still more likely to be involved in joint holdings than women in non-trustee securities, but the gap now is very small.⁷⁸ The significantly higher propensity of male investors in joint holdings of trustee securities can only be explained by the fact that they operated as joint trustees.

In the same Figure 1, we also see that proximity to company's headquarters or to the nearest stock exchange does not affect the joint holding patterns. While investors' proximity to company's registered headquarters or to the nearest stock exchange on which the security was listed was surely an attempt by investors to overcome informational asymmetries,⁷⁹ it does not seem to affect investors' decision for joint investment in any way.

⁷⁸ In our analysis above, we argued that this can be explained by the fact that women were relatively more likely to become solo executors than men. Additionally, given that it was far more likely for men to become joint trustees, a relatively higher male joint holdings in non-trustee securities might also be explained by trustee positions in trusts that allowed investment in securities outside the list defined by the several Trustee Acts.

⁷⁹ The preference of investors to invest locally has been offered as explanation in economic history either as an attempt to overcome informational asymmetries or as compliance to prevailing social norms (for a summary of these discussions see Rutterford et al., 'Local bias').

The marginal effects of the remaining explanatory variables in Table 9 have negligible economic significance, which also supports the results of our analysis in the previous sections. To give a sense of the impact of the remaining continuous independent variables on the probability P_i of joint holdings in our sample, we calculate the average marginal effects (AME) for specific changes in each variable.⁸⁰ The effects of the *investment amount* are not statistically significant in the results of Table 9. In our baseline regression (6), we get that if the *investment amount* increases by £100, the probability of joint holding falls only by 0.014 percentage points, which is almost zero. This shows that investors did not get together in joint holdings to increase their financial exposure. The marginal effects of the *security denomination* are statistically significant at the level of 5% in most specifications, but the economic significance of the results is also negligible. According to specification (6), an increase of the *security denomination* by £50 triggers an increase in the probability by 1.2 percentage points. This implies that less wealthy investors did not typically join forces to surpass an investment threshold.

In specification (8), a change in the *paid-up capital* of the company by £1m increases the probability just by 0.3 percentage points, which appears as statistically significant in Table 9 but is too small to make any actual difference in joint holdings. It seems that large companies (blue chips) did not affect the probability for joint holdings. Neither did riskier securities. In the same specification (8), the increase in the *risk* by 10 percentage points leads to a 0.3 percentage points decrease in the probability, an effect which is insignificant both statistically and economically. This implies that investors did not choose joint holdings to share the risk of riskier securities. Finally, if there was an increase in the amount of *director qualification shares* by £1k (in specification 9), this would reduce the probability of joint

⁸⁰ We compute the predicted probability of each covariate observation. We change the value of the covariate of interest by an indicated value and we calculate the predicted probabilities keeping all other covariates as they were observed. We then calculate the average change in the probability across all observations and this gives us the average ‘marginal’ effect of the covariate of interest for the specified change.

holdings by 0.3 percentage points, an effect also negligible. The results here suggests that investors did not get together in joint holdings to pass the director qualification threshold.

The regression results offer further support for our main findings. The number of joint holdings is mostly driven by the number of trusts (typically more than one trustee per trust arrangement) and to a lesser extent by familial ties and the number of executors. It was far more common for men to become joint trustees than women, a fact that explains a relatively higher probability for joint holdings between men in our full sample. Our analysis also shows that other plausible explanations for joint holdings are not supported by the evidence.

VI

Research on the history of British shareholders has ignored the issue of joint investment. This study expands recent preliminary research on joint holdings in railway companies around 1920. We exploit a unique dataset of 31,629 shareholdings in England and Wales between 1870 and 1935 that includes a broad range of sectors and security types, and includes data on gender, marital status, occupation, and size of individual holdings. Our study differs from the vast majority of empirical studies of UK shareholders that treat the first-named shareholder as sole owner and do not distinguish between shareholdings and shareholders.

Mixing shareholders with shareholdings leaves a non-negligible number of investors unaccounted for. The 31,629 shareholdings in our sample comprise 35,848 investors. An analysis based only on first-named investors ignores about 12 per cent of total shareholders. It would miss the fact that joint investment was not uncommon in UK financial markets before the 1930s: it was the option followed by as many as 20 per cent of UK investors. A study on joint holdings thus reveals important aspects of British shareholding behaviour that previous research has missed.

Our analysis shows that familial ties can explain some of the decisions to invest jointly; examples include married couples, parents and their children, and unmarried siblings. Those acting in the capacity of executors also explain some joint holdings. For instance, a widow might act as executor of her husband's will after her husband's death, together with a family member or friend, with both becoming *de facto* joint holders. However, solo holders could also take the role of executor and we find that it was more common for women to appear as sole executors than men.

A third factor behind joint holding is the prevalence of the use of trusts and trustee securities as a means of protecting and transferring wealth across the generations. Gender differences in joint holdings become particularly significant when we look at trustee securities. Although it was not unheard of for a woman to act as a trustee, in practice it was mostly men of a certain social and professional status who undertook the very demanding role of a trustee. Indeed, the most striking finding in our analysis is that about 60 per cent of male primary shareholders in trustee securities were joint holders with unrelated men. This effect cannot be explained as due to joint risk sharing nor to executors because it disappears when we look at non-trustee securities. Our multivariate regression analysis supports this argument. Joint holdings are mostly driven by the trustee effect, even when we “control” for other possible factors, which are insignificant either statistically or economically.

Recent research has revealed that women have a long tradition of participating in financial markets, with their numbers rising after the end of the nineteenth century and becoming comparable to those of male investors.⁸¹ This is also evident from the data in this study. Our closer investigation of joint holdings has revealed interesting insights into British

⁸¹ There has been great interest on this topic, see for instance: Acheson et al, 'Independent women'; Acheson and Turner, 'Shareholder liability'; *eisdem*, 'Investor behaviour'; Doe, 'Waiting for her ship to come in?'; Freeman, Pearson, and Taylor, 'Doe in the city'; Green and Owens, 'Gentlewomanly capitalism?'; Licini, 'Women's wealth and finance'; Maltby and Rutterford, 'She possessed her own fortune'; Petersson, 'Women'; Robertson and Yohn, 'Women and money'; Rutterford and Maltby, 'Widow'; Rutterford, Green, Maltby, and Owens, 'Who comprised'.

investor behaviour with regard to gender. The fact that men were more likely to invest as joint holders than women reflects deep and longstanding institutions of social ownership in British society. Research on the history of British investment behaviour should not overlook the systemic factors defining investment decisions.

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Table 1. Sample summary

	Company Name	Sampling years	Security type	Sector	Records sampled	Holdings per record	Shareholdings sampled	Additional joint holders	Trustee securities
1	A. Darracq & Co.	1906, 1916, 1926, 1935	O, P	Manufacturing	8	2,000 - 10,000	1,045	31	
2	Anglo-Persian Oil	1912, 1922, 1932	O, P	Extractive	6	3,600 - 40,000	694	36	
3	Argentine Great Western Railway	1892, 1903, 1912, 1921, 1931	O, P	Transp.& commun.	10	120 - 8,000	974	104	
4	Ashby's Cobham Brewery	1893, 1896, 1904, 1914, 1922	O, P, F	Commercial	10	10 - 83	378	154	
5	Aspley Guise and Woburn Sands Gas	1872, 1882, 1892, 1901, 1912, 1922, 1932	O	Utilities	7	34 - 43	234	4	
6	Bank of England	1872, 1882, 1892, 1902	F	Government/Financial	4	200,000 - 250,000	765	682	*
7	Barclay and Co.	1896, 1902, 1912, 1922, 1933	O	Financial	5	100 - 50,000	1,361	44	
8	Bestwood Coal and Iron Co.	1872, 1882, 1892, 1902, 1912, 1922	O, P	Extractive	10	11 - 94	309	24	
9	Bon Marche (Brixton)	1892, 1902, 1912, 1932	O, P	Commercial	4	12 - 1,000	229	15	
10	Boots Pure Drug	1893, 1900, 1910, 1920, 1930	O, P	Commercial	9	19 - 15,000	1,096	33	
11	British Columbia Fruit Lands	1912, 1921	O	Agriculture	2	450	267	22	
12	Burlington Hotels Company, The	1870, 1880, 1902, 1912, 1922, 1932	O, P	Commercial	10	150 - 460	821	49	
13	Ceylon Cocoa and Rubber	1905, 1916, 1925, 1932	O, P	Agriculture	7	35 - 350	467	19	
14	China Navigation Co , The	1872, 1881, 1891, 1901, 1911, 1921, 1931	O	Transp.& commun.	7	44 - 204	507	134	
15	City of Ely Gas Co, The	1872, 1882, 1892, 1901	O	Utilities	4	36 - 55	153	19	

16	Cuba Submarine Telegraph Co	1870, 1880, 1890, 1900, 1910, 1920	O, P	Transp.& commun.	11	95 - 780	825	100	
17	Dumont Coffee Co.	1902, 1912, 1922, 1932	O, P	Agriculture	8	1,000	716	41	
18	Foreign & Colonial Government Trust	1882, 1892, 1902, 1912, 1922, 1932	O, P	Financial	12	3,000 - 10,000	1,787	128	
19	Gas, Water & General Investment Trust	1889, 1898, 1909, 1919, 1929	O, P	Financial	9	600 - 900	1,089	25	
20	Great Grimsby Water Works, The	1870, 1880, 1891, 1901, 1915, 1925, 1935	O	Utilities	7	52 - 218	890	219	
21	Halifax & Huddersfield Union Banking	1875, 1881, 1891, 1901, 1910	O	Financial	5	60 - 1,000	795	151	
22	Hallamshire Steel & File Co, the	1873, 1882, 1892, 1902, 1911	O, B	Manufacturing	6	34 - 65	253	8	
23	Havana Cigar and Tobacco Factories	1902, 1912, 1921, 1932	O, P	Agriculture	6	500 - 570	533	51	
24	Havana Oil	1911, 1922	O	Extractive	2	1,050 - 2,500	347	8	
25	Henry Tate & Sons	1903, 1913	O, P	Manufacturing	4	25 - 1,000	237	18	
26	Indian Tea Company of Cachar	1872, 1882, 1892, 1902, 1912, 1922, 1932	O	Agriculture	7	160 - 200	614	33	
27	J. Lyons and Co.	1894, 1901, 1910, 1920, 1930	O, P	Commercial	8	150 - 30,000	1,150	39	
28	J.S. Fry & Sons	1901, 1911, 1921, 1931	O, P	Manufacturing	6	10 - 3,000	807	49	
29	Klanang Produce Co.	1902, 1912	O	Agriculture	2	19 - 600	228	5	
30	London and Tilbury Lighterage Co.	1891, 1901	O	Transp.& commun.	2	130 - 175	169	7	
31	London Electric Supply Corp.	1887, 1893, 1903, 1913, 1933	O, P	Utilities	9	7 - 2,100	858	114	
32	London, Brighton & South Coast Railway	1897, 1906, 1919	O, P, F	Transp.& commun.	9	>500	1,229	615	**
33	Luipaard's Vlei Estate and Gold Mining	1888, 1896	O	Extractive	2	82 - 2,700	240	0	
34	Magadi Soda Co.	1912, 1922	O	Extractive	2	900 - 3,000	643	42	
35	New Peterborough Brick Co.	1902, 1912, 1922	O, P	Manufacturing	6	107 - 192	471	14	
36	Palatine Insurance Co.	1891, 1900	O	Financial	2	1,000 - 1,500	282	7	

37	Pease and Partners	1901, 1912, 1924, 1931	O	Extractive	4	11 - 7,000	886	67	
38	Prudential Assurance Co.	1892, 1902, 1915, 1920, 1930	O	Financial	5	140 - 2,000	904	154	
39	Reckitt and Sons	1901, 1911, 1921, 1931	O, P	Manufacturing	8	800 - 9,000	933	46	
40	Samuel Allsopp & Sons	1892, 1902, 1915, 1925	O, P	Commercial	8	2,000 - 3,000	1,583	221	
41	Sheffield District Railway	1902, 1912, 1922	O, P, F	Transp.& commun.	9	300 - 400	987	211	
42	Sir W.G. Armstrong & Co.	1896, 1901, 1910, 1924, 1931	O, P	Manufacturing	9	3,000 - 35,000	1,051	102	
43	Southern Mahratta Railway Co.	1882, 1892, 1902, 1912, 1922, 1932	F	Transp.& commun.	6	1,000 - 5,000	871	278	***
44	Staley Mill Company	1872, 1882, 1892, 1902, 1913, 1923, 1933	O	Manufacturing	7	14 - 43	197	20	
45	Tempeh (Java) Rubber Plantations	1911	O	Agriculture	1	600	146	3	
46	Wantage Tramway Company	1874, 1884, 1894, 1904, 1914, 1924, 1934	O, P	Transp.& commun.	12	40 - 50	384	63	
47	West Gloucestershire Power Co.	1924, 1931	O, P	Utilities	4	221 - 297	224	10	
<hr/>									
	Total:								
	197 sampling firm-years	197 sampling firm-years							
	301 records sampled				301		31,629	4,219	
	31,629 shareholdings								
	35,848 shareholders								
<hr/>									

Note: Security type: O = Ordinary share or stock; P = Preferred share or stock; F = Fixed interest securities. Trustee securities: * = all eligible as trustee securities; ** = all P and F eligible as trustee securities; *** = 1902, 1912, 1922, 1932 eligible as trustee securities.

Sources: Our dataset.

Table 2. Geographical distribution of sampled investors compared with relevant estimations.

	Location of investors % in our sample		Regional investor breakdown % from Ellinger and Carter based on 1941 records	
	1870s-1930s	1930s only	Investors	Population
London	25	18	24	10
Home counties and Sussex	19	22	20	15
Southern England	4	4	5	4
South-western England	7	9	5	3
Wales	2	2	2	5
Western England	2	2	2	4
Eastern England	5	5	4	4
Midlands	9	10	9	13
Lancs and Cheshire	7	7	6	12
Yorkshire	11	9	4	9
Northern England	4	4	3	5
Scotland	5	7	10	10
Northern Ireland			2	3
Eire			2	6
Rest of the world			1	
Total	100	100	100	100

Note: The Ellinger and Carter sample may include companies registered in Scotland, whereas our sample includes only companies registered in England and Wales. The Ellinger and Carter sample is based on shareholdings (= solo investor or primary joint holder), and the comparison with our sample is also based on shareholdings for consistency.

Sources: Our sample and Ellinger and Carter, ‘How many investors’.

Table 3. Proportion of solo and joint holders in our sample.

	Solo holders	Joint holders			Total
		All	Primary	Secondary	
Panel (a) Full sample					
All holders (no. of records = 301; total primary sh. = 31,629; total sh. = 35,228)					
% all investors	80.3	19.7	9.5	10.2	100.0
% of male	76.6	23.4	10.6	12.8	100.0
% of female	88.0	12.0	7.2	4.8	100.0
All holders before 1900 (no. of records = 76; total primary sh.= 6,271; all sh. = 7,297)					
% all investors	74.7	25.3	11.2	14.1	100.0
% of male	72.2	27.8	11.8	15.9	100.0
% of female	83.1	16.9	9.1	7.7	100.0
All holders after 1900 (no. of records = 225; total primary sh. = 25,358; total sh. = 27,931)					
% all investors	81.7	18.3	9.0	9.2	100.0
% of male	77.9	22.1	10.2	11.8	100.0
% of female	88.9	11.1	6.8	4.3	100.0
Panel (b) UK Railways (ordinary and preferred shares)					
London, Brighton & South Coast Railway (our sample; years 1897, 1906, 1919)					
(no. of records = 9; total primary sh. = 1,229; total sh. = 1,844)					
% of male	45.7	54.3	21.5	32.7	100.0
% of female	72.7	27.3	17.3	10.0	100.0
North Eastern (1921, Acheson et al.; total sh. = 78,542)					
% of male	40.4	59.6	22.2	37.4	100.0
% of female	78.6	21.4	9.6	11.7	99.9
London and North Western (1915, Acheson et al.; total sh. = 101,970)					
% of male	34.9	65.1	24.5	40.6	100.0
% of female	73.9	26.1	12.9	13.2	100.0
Scottish railways (1915-1922, Acheson et al.; total sh. = 95,098)					
% of male	63.4	36.6	–	–	100.0
% of female	86.2	13.8	–	–	100.0

Note: Sh.= shareholders in the description of the total number of investors in each category. We have excluded from our calculations for the London, Brighton, and South Coast Railway in panel (b) the fixed interest securities so that our results are directly comparable to Acheson et al., ‘Independent women’. As explained in the main text, investors were classified on the basis of whether they were entered into the register as solo shareholders or as joint holders with another individual(s). Joint holders were split into primary joint shareholders and secondary joint holders.

Sources: Our sample and Table 5 from Acheson et al., ‘Independent women’ for Scottish railways (Caledonian, North British, and Glasgow and South Western), North Eastern railway, and London and North Western railway.

Table 4. Proportion of solo and joint holders by sectors.

	Solo holders	Joint holders			Total
		All	Primary	Secondary	
Agriculture companies (no. of records = 33; total primary sh. = 2,971; total sh. = 3,145)					
% all investors	90.8	9.2	5.3	4.0	100.0
% of male	89.6	10.4	5.5	4.9	100.0
% of female	93.5	6.5	4.7	1.8	100.0
Commercial companies (no. of records = 49; total primary sh. = 5,257; total sh. = 5,769)					
% all investors	84.8	15.2	7.2	8.0	100.0
% of male	80.8	19.2	8.3	10.9	100.0
% of female	91.0	9.0	5.6	3.4	100.0
Extractive companies (no. of records = 26; total primary sh. = 3,119; total sh. = 3,296)					
% all investors	91.2	8.8	4.8	4.0	100.0
% of male	90.3	9.7	4.9	4.8	100.0
% of female	93.5	6.5	4.5	1.9	100.0
Financial companies (no. of records = 38; total primary sh. = 6,218; total sh. = 6,727)					
% all investors	86.7	13.3	7.5	5.7	100.0
% of male	85.2	14.8	8.1	6.7	100.0
% of female	89.8	10.2	6.3	3.8	100.0
Bank of England (no. of records = 4; total primary sh. = 765; total sh. = 1,447)					
% all investors	24.9	75.1	28.0	47.1	100.0
% of male	14.5	85.5	31.5	54.0	100.0
% of female	60.6	39.4	15.9	23.5	100.0
Manufacturing companies (no. of records = 54; total primary sh. = 4,994; total sh. = 5,282)					
% all investors	89.9	10.1	5.4	4.7	100.0
% of male	89.0	11.0	5.8	5.2	100.0
% of female	91.6	8.4	4.6	3.8	100.0
Utility companies (no. of records = 31; total primary sh. = 2,359; total sh. = 2,725)					
% all investors	78.4	21.6	9.3	12.3	100.0
% of male	74.8	25.2	10.0	15.1	100.0
% of female	85.8	14.2	7.7	6.5	100.0
Railway companies (ordinary and preferred shares)					
(no. of records = 34; total primary sh. = 4,061; total sh. = 5,269)					
% all investors	72.6	27.4	12.6	14.8	100.0
% of male	67.5	32.5	13.5	19.0	100.0
% of female	83.8	16.2	10.5	5.6	100.0
Non-railway transport and communication companies					
(no. of records = 32; total primary sh. = 1,885; total sh. = 2,189)					
% all investors	77.1	22.9	10.6	12.3	100.0
% of male	74.4	25.6	11.2	14.4	100.0
% of female	83.3	16.7	9.3	7.4	100.0

Note: Sh.= shareholders in the description of the total number of investors in each category. Investors were classified on the basis of whether they were entered into the register as solo shareholders or as joint holders with another individual(s). Joint holders were split into primary joint shareholders and secondary joint holders.

Sources: Our sample.

Table 5. Proportion of solo and joint holders by security types.

	Solo holders	Joint holders			Total
		All	Primary	Secondary	
Panel (a) Security types					
Ordinary shares (no. of records = 185; total primary sh. = 18,270; total sh. = 19,720)					
% all investors	85.4	14.6	7.3	7.4	100.0
% of male	83.7	16.3	7.6	8.7	100.0
% of female	89.1	10.9	6.6	4.2	100.0
Preferred shares (no. of records = 95; total primary sh. = 10,456; total sh. = 11,189)					
% all investors	86.3	13.7	7.1	6.6	100.0
% of male	83.4	16.6	8.2	8.5	100.0
% of female	91.1	8.9	5.4	3.5	100.0
Fixed interest (no. of records = 21; total primary sh. = 2,903; total sh. = 4,319)					
% all investors	41.5	58.5	25.7	32.8	100.0
% of male	31.0	69.0	29.0	40.0	100.0
% of female	70.8	29.2	16.5	12.7	100.0
Panel (b) Trustee status					
Trustee securities (no. of records = 14; total primary sh. = 2,142; total sh. = 3,379)					
% all investors	35.6	64.4	27.8	36.6	100.0
% of male	23.2	76.8	31.7	45.1	100.0
% of female	69.2	30.8	17.3	13.5	100.0
Non-trustee securities (no. of records = 287; total primary sh. = 29,487; total sh. = 31,849)					
% all investors	85.0	15.0	7.5	7.4	100.0
% of male	82.8	17.2	8.2	9.1	100.0
% of female	89.7	10.3	6.3	4.0	100.0
Low risk non-trustee securities (Preferred + fixed interest) (no. of records = 102; total primary sh. = 11,217; total sh. = 12,129)					
% all investors	84.5	15.5	8.0	7.5	100.0
% of male	81.0	19.0	9.2	9.7	100.0
% of female	90.4	9.6	5.9	3.8	100.0

Note: Sh.= shareholders in the description of the total number of investors in each category. Investors were classified on the basis of whether they were entered into the register as solo shareholders or as joint holders with another individual(s). Joint holders were split into primary joint shareholders and secondary joint holders.

Sources: Our sample.

Table 6. Proportion of solo and joint holders by security denomination value.

	Solo holders	Joint holders			Total
		All	Primary	Secondary	
Low denomination: nominal value £10 and under					
(no. of records = 188; total primary sh. = 19,716; total sh. = 20,965)					
% all investors	87.8	12.2	6.0	6.1	100.0
% of male	86.1	13.9	6.4	7.5	100.0
% of female	91.2	8.8	5.3	3.5	100.0
High denomination non trustee: nominal value over £10					
(no. of records = 84; total primary sh. = 2,472; total sh. = 2,722)					
% all investors	79.6	20.4	10.5	9.9	100.0
% of male	76.5	23.5	11.4	12.1	100.0
% of female	86.5	13.5	8.4	5.1	100.0
Stock, non-trustee					
(no. of records = 61; total primary sh. = 7,299; total sh. = 8,162)					
% all investors	78.2	21.8	11.7	10.1	100.0
% of male	73.7	26.3	13.4	13.0	100.0
% of female	87.1	12.9	8.4	4.6	100.0
Stock, trustee					
(no. of records = 14; total primary sh. = 2,142; total sh. = 3,379)					
% all investors	35.6	64.4	27.8	36.6	100.0
% of male	23.2	76.8	31.7	45.1	100.0
% of female	69.2	30.8	17.3	13.5	100.0

Notes. Sh.= shareholders in the description of the total number of investors in each category. As explained in the main text, investors were classified on the basis of whether they were entered into the register as solo shareholders or as joint holders with another individual(s). Joint holders were split into primary joint shareholders and secondary joint holders. The total number of company-year-security records here adds up to 311 as some records had securities of different nominal values.

Source: Our sample.

Table 7. Average value of investment by security type in £.

	Solo holders	Joint holders	
		Primary	Secondary
All securities (no. of records = 301; total primary sh. = 31,629; total sh. = 35,228)			
all investors	714.6	747.5	744.7
male	932.4	858.8	825.4
female	318.2	403.8	294.2
Trustee securities (no. of records = 14; total primary sh. = 2,142; total sh. = 3,379)			
all investors	1122.4	861.9	847.0
male	1353.8	903.6	857.2
female	912.3	655.4	754.1
Non-trustee securities (no. of records = 287; total primary sh. = 29,487; total sh. = 31,849)			
all investors	696.5	702.8	691.2
male	918.8	838.8	807.2
female	278.3	343.6	160.8
Ordinary shares (no. of records = 185; total primary sh. = 18,270; total sh. = 19,720)			
all investors	828.3	785.7	769.1
male	1065.2	929.1	892.6
female	314.0	407.4	184.4
Preferred shares (no. of records = 95; total primary sh. = 10,456; total sh. = 11,189)			
all investors	457.0	423.6	481.7
male	613.9	519.9	577.8
female	226.4	192.4	105.0
Fixed Interest (no. of records = 21, no. of holdings 2903, no. of holders = 4319) (no. of records = 21; total primary sh. = 2,903; total sh. = 4,319)			
all investors	1035.3	930.2	855.9
male	1237.8	986.0	876.0
female	789.1	658.0	680.1

Notes. The table reports the average investment value for shareholdings. This means that the investment under the category of ‘joint holders’ is the total investment of the joint holding divided by the number of joint holders. This is an estimate of an *assumed* investment that allows us to make some comparisons.

Source: Our sample.

Table 8. Familial ties among joint shareholdings.

Primary female shareholder with secondary (% of all female primary and solo shareholders):	All securities	Trustee securities	Non-trustee securities
known spouse	0.0	0.0	0.0
related female	1.3	2.8	1.1
unrelated female	0.6	2.5	0.5
related male	2.6	5.5	2.4
unrelated male	3.2	12.1	2.5
Primary male shareholder with secondary (% of all male primary and solo shareholders):	All securities	Trustee securities	Non-trustee securities
known spouse	0.4	1.2	0.3
related female	0.7	2.6	0.6
unrelated female	0.5	2.2	0.4
related male	2.7	11.7	2.1
unrelated male	9.0	60.3	5.4

Note. The results in the above table do not exactly match the results in Tables 2, 3, and 4. There is some ‘double counting’ of joint holdings when there are more than two joint holders that belong to more than one category (for instance, a primary female shareholder with a related male and an unrelated female as secondary holders). Differences are small, so the results remain comparable to Table 2.

Source: Our sample.

Table 9. Logistic regression results.

Independent variables	Models:								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Constant	-1.427*** (0.211)	-1.813*** (0.076)	-1.733*** (0.188)	-2.375*** (0.102)	-2.212*** (0.114)	-1.641*** (0.082)	-1.698*** (0.086)	-1.817*** (0.160)	-1.970*** (0.108)
Female	-0.793*** (0.079)				-0.492*** (0.091)	-0.580*** (0.057)	-0.592*** (0.058)	-0.587*** (0.078)	-0.547*** (0.064)
Trustee security		2.217*** (0.198)				2.663*** (0.209)	1.947*** (0.308)	1.713*** (0.276)	1.775*** (0.283)
Local to stock exchange			0.135* (0.081)						
Local to company HQ				0.172** (0.070)	0.150** (0.076)				
Female x local to company HQ					-0.002 (0.122)				
Female x trustee security						-1.427*** (0.140)	-1.245*** (0.157)	-1.240*** (0.164)	-1.286*** (0.159)
Investment amount (£K)	-0.009 (0.009)	-0.006 (0.010)	-0.004 (0.007)	-0.003 (0.007)	-0.006 (0.008)	-0.011 (0.013)	-0.007 (0.010)	0.009 (0.012)	-0.001 (0.008)

Security denomination (£)	0.005 (0.005)	0.002** (0.001)	0.004 (0.004)	0.003 (0.002)	0.002 (0.002)	0.002** (0.001)	0.002** (0.001)	0.004** (0.002)	0.006*** (0.002)
Paid-up capital (£m)							0.017 (0.011)	0.024*** (0.009)	0.019** (0.010)
Risk								-0.205 (0.176)	
Director qualification shares (£K)									-0.026 (0.040)
Observations	35,228	35,228	32,883	29,752	29,752	35,228	33,781	22,228	23,590
Clusters	301	301	295	295	295	301	297	149	182

* significant at the 10% level.

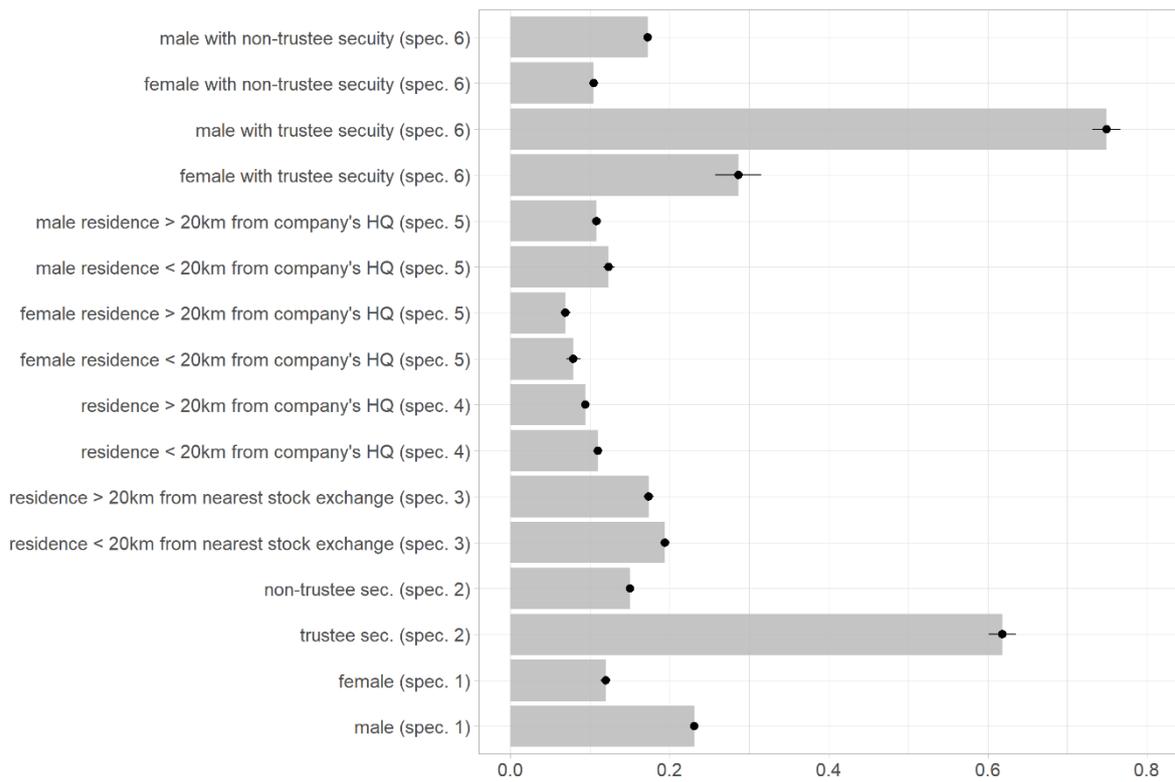
** significant at the 5% level.

*** significant at the 1% level

Note. Clustered standard errors in parenthesis. The standard errors have been corrected using the robust covariance matrix to allow for clustering at the share record level. The table reports the number of clusters, which vary according to the availability of the independent variables.

Source: Our sample.

Figure 1. Predicted probabilities.



Notes. The figure shows the predicted probabilities of the categorical explanatory variables for the first six specifications in Table 9. To get these predicted probabilities we hold all other independent variables to their means.

Source: Our sample.

Appendix Table 1. Definition of the variables used in regressions and summary statistics.

Variables	Description	Source
Joint holder	Dummy variable that takes the value 1 if the investor is involved in a joint holding, and 0 otherwise.	Our sample/Form E
Female	Dummy variable that takes the value 1 if the investor is female and 0 if the investor is male.	Our sample/Form E
Trustee security	Dummy variable that takes the value 1 if the holding is a trustee security, according to the existing Trustee Acts, and 0 otherwise.	Our sample/Several Trustee Acts
Local to stock exchange	Dummy variable that takes the value 1 if the investor lives within 20km from the nearest stock exchange on which the security is listed, and 0 otherwise.	Our sample/Form E
Local to company HQ	Dummy variable that takes the value 1 if the investor lives within 20km from the company's registered headquarters, and 0 otherwise.	Our sample/Form E
Investment amount (£k)	The amount invested by the individual investor in £k.	Our sample/Form E
Security denomination (£)	The denomination value of the security in £.	Our sample/Form E
Paid-up capital (£m)	The issued and paid-up capital of the company in £m.	Our sample/SEYB
Risk	The difference between higher and lower price of the security in the last three years, divided by the average price of the annual higher and lower prices for the last three years.	SEYB/IMM
Director qualification shares (£k)	Value of holdings a shareholder needed to qualify for a director in £1k.	SEYB

Notes. IMM = Investor's Monthly Manual, SEYB = Stock Exchange Yearbook.