

*A Quarter Century of Shareholdings and Trades of Finnish Stocks**

Matti Keloharju and Antti Lehtinen

Abstract

This paper studies patterns in ownership of Finnish stocks in 2018, and changes in ownership patterns between 1995 and 2018. Our key findings are as follows. (1) In 2018, 12.9% of Finns owned stocks directly. The median stock portfolio was worth 5200 euros. (2) Women account for 41% of shareholders, 29% of individuals' combined share wealth, and 26% of share millionaires. Women's share of shareholders and share wealth decreased during our sample period. (3) Actively acquired stock positions tend to have shorter holding periods than passively acquired ones. Among actively acquired positions, stocks acquired from stock exchange trades have shorter holding periods than stocks acquired from initial public offerings or seasoned equity offerings. (4) Men's and Finnish speakers' trades tend to have shorter holding periods than those of women and Swedish speakers. Larger positions have shorter holding periods than smaller ones.

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1. Introduction

This paper presents a descriptive analysis of shareownership patterns in Finnish listed companies in the year 2018 using data from Euroclear Finland (henceforth, Euroclear). Moreover, the paper analyzes trends in shareownership patterns and the duration of shareholdings. Our analysis on shareownership and trends in shareownership is largely an update of our earlier report (Keloharju and Lehtinen 2015), in particular from the three last sample years. We have also updated some earlier figures due to improvements in the source data. The section on the duration of shereholdings is completely new. Here, our analysis greatly benefits from a long panel on investors' shareholdings and trades.

The remainder of the paper is organized as follows. The next section describes the data. Section 3 describes ownership patterns at the beginning of 2018. Section 4 analyzes trends in shareownership. Section 5 describes investors' holding periods. Section 6 summarizes the findings.

2. Data

Our data include the initial balance in Euroclear's ownership records on January 1, 1995, and all changes in these records until January 1, 2018, for all publicly quoted companies represented in the paperless system of share ownership and trading, called the Book Entry System. Moreover, the ownership records also include ownership and change of ownership for many other asset classes, including structured securities and bonds. In all, there are over 300 million initial balance records and changes of ownership in our data. Since all changes in the records are stamped on the settlement day, these data allow us to determine the ownership for each stockholder at any point of time between the above two dates. Our paper analyzes registered stockholder ownership records at the annual frequency. This means that our time series consists of 24 annual snapshots.

The Book Entry System entails compulsory registration of holdings for Finnish individuals and institutions. Foreigners are partially exempted from registration as they can opt for registration in a nominee name. This means that their holdings are combined to a larger pool of nominee registered holdings and cannot be separated from one another.

We use the data to generate the following information for each investor and for each point in time:

- Investor identification number: from 1 to 1,833,657. Individual investors are initially identified by their social security number and companies and other institutions by their official registration number. With the help of this unique number, the holdings of an investor are kept separate from the holdings of other investors. For security reasons, in our data, the unique identifying number is replaced by a unique running number.
- Share class
- Number of shares
- Ownership type. Euroclear classifies ownership into eight types of which only two have practical significance: private ownership and nominee registered ownership.
- Investor category. This identifies the line of business or profession of the investor. It is based on the 73-category institutional classification system by Statistics Finland. Our aggregation of the categories results in six categories or less.
- Dummy variables for males and females (individual investors)
- Birth year (individual investors)

- Mother tongue (individual investors)
- Zip code. We designate investors with a post office box number to the respective zip code.

The section on the duration of shareholdings additionally uses the following data:

- Trade type. The registry recognizes 48 different trade types, which characterize the underlying reason for the ownership change. Examples of trading types include stock exchange trade, trade outside the exchange, equity offering, gift, and inheritance.
- Trading day. This variable characterizes the day a stock exchange trade has taken place.
- Settlement day. This is the day when Euroclear has registered the change in shareholdings. If we do not have information on the trading day, we use the settlement day instead.

While our database includes comprehensive data on direct shareholdings, it does not cover indirect shareholdings. Therefore, for example, the holdings of investment companies owned by a single individual are considered to represent institutional ownership. For the same reason, we do not consider individuals' indirect ownership through mutual funds.

Many companies have listed two share classes of which one is attached with a greater number of votes than the other. This makes the stocks imperfect substitutes for each other and potentially gives rise to different owner clienteles. Therefore, we consider share classes with voting power differences as separate stocks. Unlisted share classes are not analyzed in the paper.

The classification of investor categories changed in 2007. Our classification of the investor categories in the year 2018 is based on the most recent classification in the data. However, many of the investors with old category codes do not appear in the data after 2007, i.e. we do not directly observe their new investor-category codes. The same problem applies to many investors that only have transactions in the new-category domain: for them, we do not observe the old investor-category codes. Moreover, for some investor categories, there is no exact correspondence between the old and new codes. For these investor categories, investors are randomly assigned from old categories to new categories in the same proportion as old-category investors known to have an old and a new category code correspond to various new categories.

To put the data obtained from Euroclear into perspective, we compare it to population statistics detailed on Statistics Finland's web page. Statistics Finland's data also allow us to aggregate zip code level information to municipality and province levels.

3. Ownership structure in 2018

3.1. Distribution of investment wealth by investor category

Table 1 reports the number of investors by asset class at the beginning of 2018¹.

With about 747,000 distinct investors, stocks are the largest investor category, followed by structured securities and derivatives (139,000 investors), bonds (23,000 investors), and exchange-traded funds (9,000 investors). As expected, the vast majority of investors in each asset class are individual investors: for example, they account for 95% of both stockholders and of owners of structured securities and derivatives. All in all, 12.9% of Finns own stocks directly. Our subsequent analyses focus on stockholdings, which is by far the most important asset class represented in Euroclear.

¹ The table only includes asset classes that have been acquired for investment purposes and that are not very short-lived. Therefore, for example, we do not consider subscription rights in our analysis.

TABLE 1. Number of investors by asset class and investor category at January 1, 2018

Number of privately registered owners in different asset classes. Nominee registered shares are registered in a financial intermediary's name, and are thus excluded from the table.

Investor category	Shares	Bonds	Structured securities and derivatives	Exchange traded funds
Domestic				
Institutions				
Corporations	23,205	1,235	4,293	413
Financial and insurance corporations	405	264	200	36
Government and municipalities	408	80	80	13
Non-profit institutions	5,078	610	985	93
Individuals	709,269	21,035	132,079	8,757
Foreigners	8,371	123	1,457	36
Totals	746,736	23,347	139,094	9,348
<i>Population share of individual investors</i>	12.9 %	0.4 %	2.4 %	0.2 %

Table 2 reports on the value of stock portfolios of each investor category. Domestic investors own about one-half of the stock market capitalization of 227 billion euros. Among domestic investor categories, individual investors are the largest investor category, accounting for 16% of the stockholdings. Among domestic institutional owners, the largest shareholders are government and municipalities, and corporations, which both own 14% of the shares. They are followed by financial and insurance institutions and non-profit institutions, which both own 3.6% of stock market capitalization.

Individuals' average stock portfolio is worth 52,000 euros. The median portfolio is worth only one-tenth of the mean. The difference between the mean and the median is driven by investors with large ownership stakes. This pattern is even clearer for institutional investors whose portfolios are on average much larger than those of individual investors. For example, the average stock portfolio of investors belonging to the government and municipalities category is worth 77 million euros, while their median portfolio is worth 41,000 euros.

TABLE 2. Share wealth by investor category at January 1, 2018

Investor category	Mean share wealth, 1000 €	Median share wealth, 1000 €	Share wealth, mill. €	Share of share wealth
Domestic				
Institutions				
Corporations	1,323	19.2	30,690	13.5 %
Financial and insurance corporations	20,148	350.0	8,160	3.6 %
Government and municipalities	76,978	41.2	31,407	13.8 %
Non-profit institutions	1,598	24.1	8,113	3.6 %
Individuals	52	5.2	36,778	16.2 %
Foreign				
Privately registered	1,068	5.3	8,938	3.9 %
Nominee registered			103,287	45.4 %
Totals			227,373	100.0 %

3.2. Joint distribution of age and sex and the relationship between share wealth, age, and sex

Table 3 shows the joint distribution of age and sex and for the entire Finnish population and for shareholders. Moreover, the table tabulates the sex and age distribution of investment wealth. The mean age of male investors is 55 years and that of female investors is 57 years; the corresponding numbers for the population are 41 and 44 years, respectively. In other words, investors are on average about 14 years older than the population.

TABLE 3. Population, investors, and share wealth by age and sex at January 1, 2018

We assume that one-half of the investors have been born on each half of the year. Share millionaires are defined as investors who own stocks worth at least one million euros.

Age group	Population		Investors					
	Men	Women	# investors		Share wealth		# share millionaires	
			Men	Women	Men	Women	Men	Women
90-	0.2 %	0.7 %	1.2 %	1.2 %	1.7 %	1.1 %	2.4 %	1.4 %
85-89	0.6 %	1.2 %	1.5 %	1.5 %	2.2 %	1.3 %	3.4 %	1.7 %
80-84	1.1 %	1.6 %	2.4 %	2.1 %	3.7 %	2.0 %	5.4 %	2.0 %
75-79	1.6 %	2.1 %	3.7 %	3.1 %	5.9 %	3.1 %	7.9 %	3.3 %
70-74	2.6 %	3.0 %	5.7 %	4.6 %	10.9 %	4.1 %	13.0 %	3.8 %
65-69	3.2 %	3.5 %	5.9 %	4.7 %	9.5 %	3.6 %	9.6 %	2.8 %
60-64	3.3 %	3.4 %	5.1 %	3.9 %	7.2 %	3.2 %	8.1 %	2.3 %
55-59	3.3 %	3.3 %	4.8 %	3.5 %	6.8 %	2.6 %	6.7 %	2.2 %
50-54	3.4 %	3.3 %	4.8 %	3.4 %	6.7 %	2.2 %	6.2 %	1.9 %
45-49	3.0 %	2.9 %	4.3 %	2.7 %	5.4 %	1.3 %	3.5 %	1.3 %
40-44	3.1 %	2.9 %	4.3 %	2.3 %	4.3 %	1.2 %	3.2 %	0.8 %
35-39	3.3 %	3.1 %	3.9 %	2.0 %	2.2 %	1.1 %	1.6 %	0.8 %
30-34	3.3 %	3.1 %	3.4 %	1.7 %	1.6 %	0.8 %	1.0 %	0.5 %
25-29	3.3 %	3.1 %	2.9 %	1.3 %	1.1 %	0.6 %	0.5 %	0.7 %
20-24	3.0 %	2.9 %	2.0 %	1.0 %	0.9 %	0.4 %	0.6 %	0.4 %
15-19	2.8 %	2.6 %	1.0 %	0.7 %	0.3 %	0.3 %	0.5 %	0.2 %
10-14	2.8 %	2.7 %	0.7 %	0.6 %	0.2 %	0.2 %	0.0 %	0.1 %
5-9	2.9 %	2.8 %	0.7 %	0.6 %	0.1 %	0.1 %	0.1 %	0.0 %
0-4	2.6 %	2.5 %	0.4 %	0.3 %	0.0 %	0.0 %	0.0 %	0.0 %
Totals	49.3 %	50.7 %	58.7 %	41.3 %	70.9 %	29.1 %	73.7 %	26.3 %
Mean age	40.8	43.5	54.3	57.4			65.3	65.3

The shareownership patterns of men and women differ from each other. 59% of the individual investors are men and 41% of them are women. Share wealth has an even more skewed gender distribution than the number of investors: women own 29% of individuals' share wealth.

Table 3 also reports the fraction of the 3904 investors with at least one million euros worth of shares (henceforth, millionaires) by age and sex. As expected from the investment wealth figures, men are more dominant among millionaires than among investors at large. Women account for 26% of the millionaires, which is 15 percentage points less than their share of all investors. Millionaires are on average 65 years old, i.e. they are older than investors in general.

Figure 1 illustrates the proportion of inhabitants and investors in each age and sex category. Figure 2 compares the proportion of inhabitants in each age and sex category to the proportion of investment wealth owned by the investors in this category.

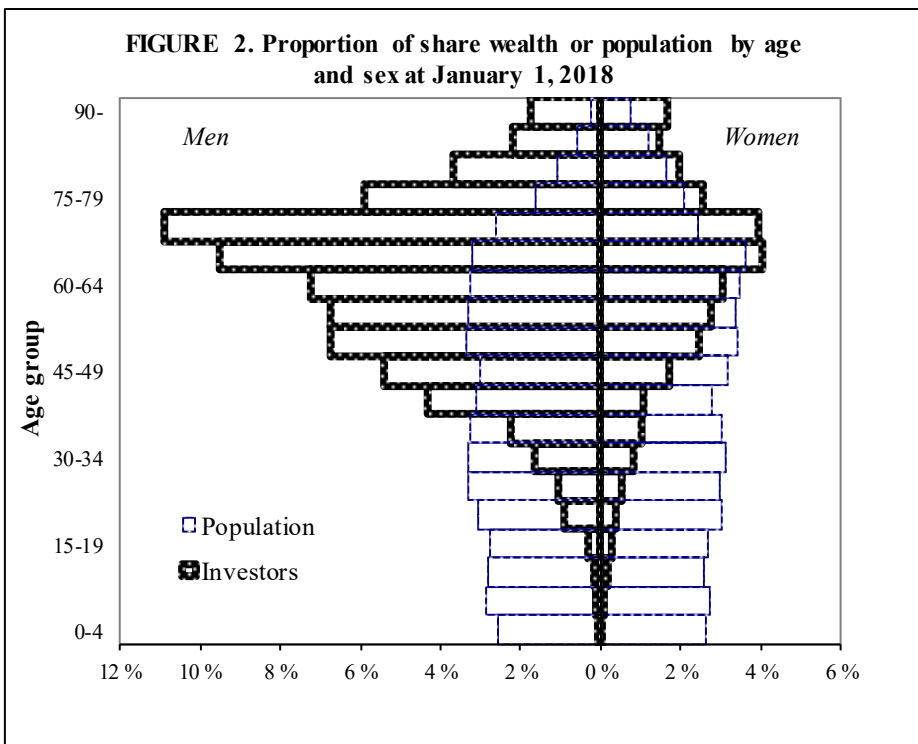
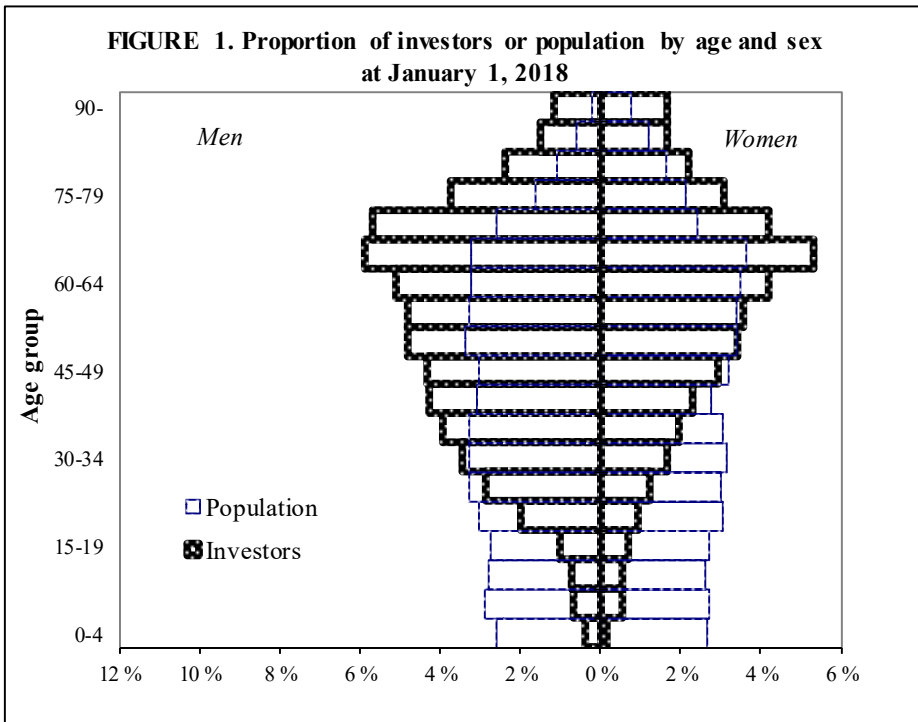
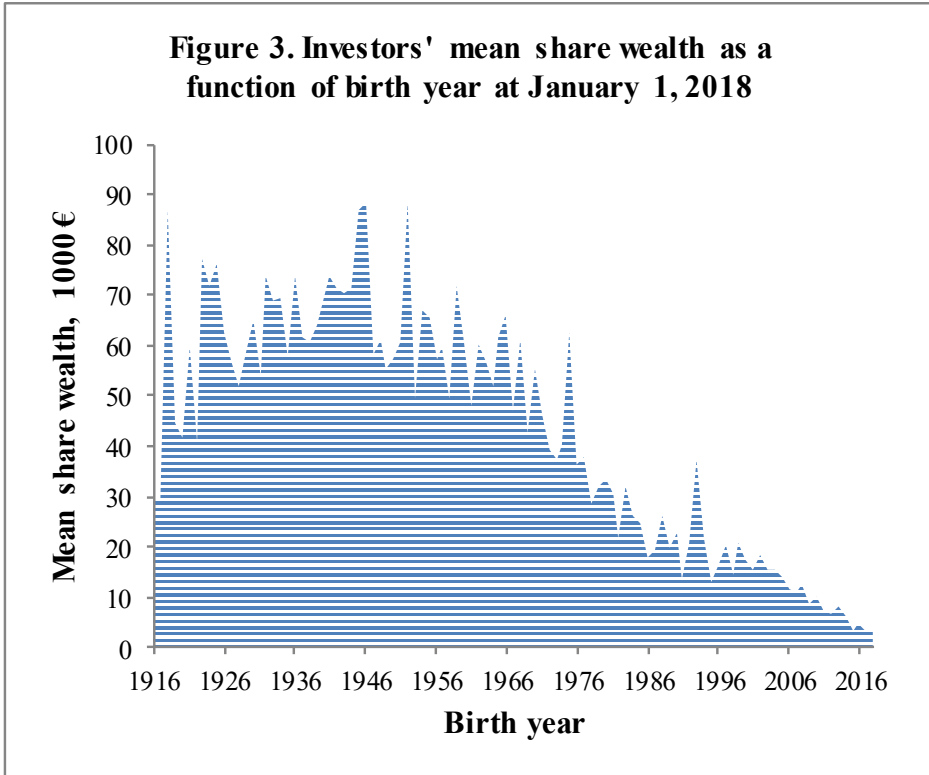


Figure 3 displays individual investors' mean share wealth as a function of their birth year. Older investors are on average wealthier than younger investors: for example, the mean wealth of investors born in 1945 is 87,000 euros, whereas that of investors born in 1990 is 23,000 euros. Overall, the mean portfolio size increases with age up to about 70 years, after which it gradually decreases.



3.3. Share investment activity and share wealth by municipality and region

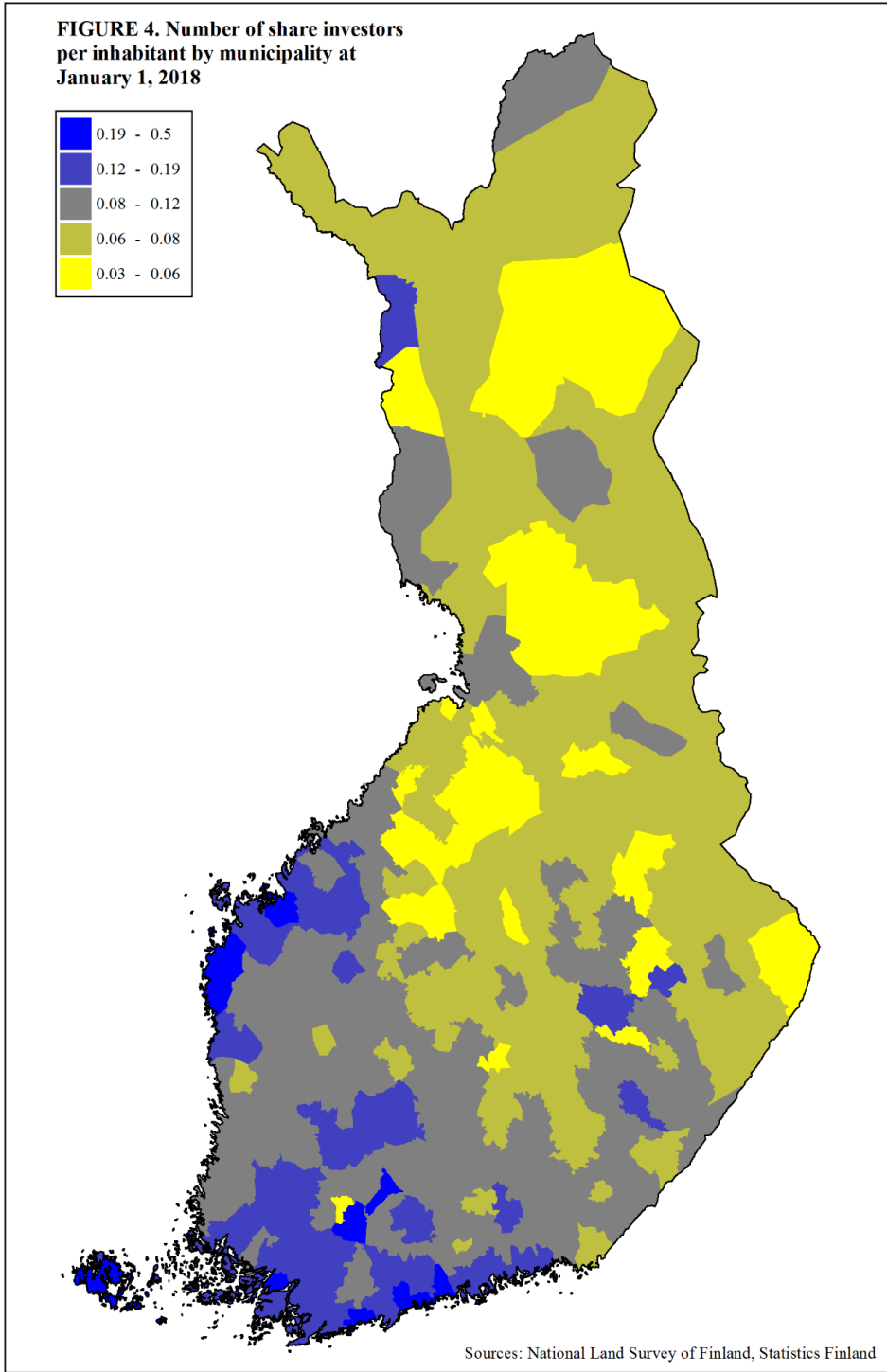
Table 4 shows how investment wealth in Finland is distributed across provinces. There are large differences in the relative frequency of investor-inhabitants. In particular, the regions of Ahvenanmaa and the Greater Helsinki Area stand out: the ratio of investor-inhabitants to all inhabitants is in Ahvenanmaa 27% and in the Greater Helsinki Area 20%, whereas the national average is 13%. The next-largest investment activity is in Pohjanmaa and in the rest of Uusimaa (excluding the Greater Helsinki Area) where 15% of the inhabitants own stocks. The portfolios are on average largest in the Greater Helsinki Area, followed by Pohjois-Savo and Ahvenanmaa. The sizeable average portfolio in Pohjois-Savo is probably largely due to a concentration of Ponsse's ownership in the Vieremä region.

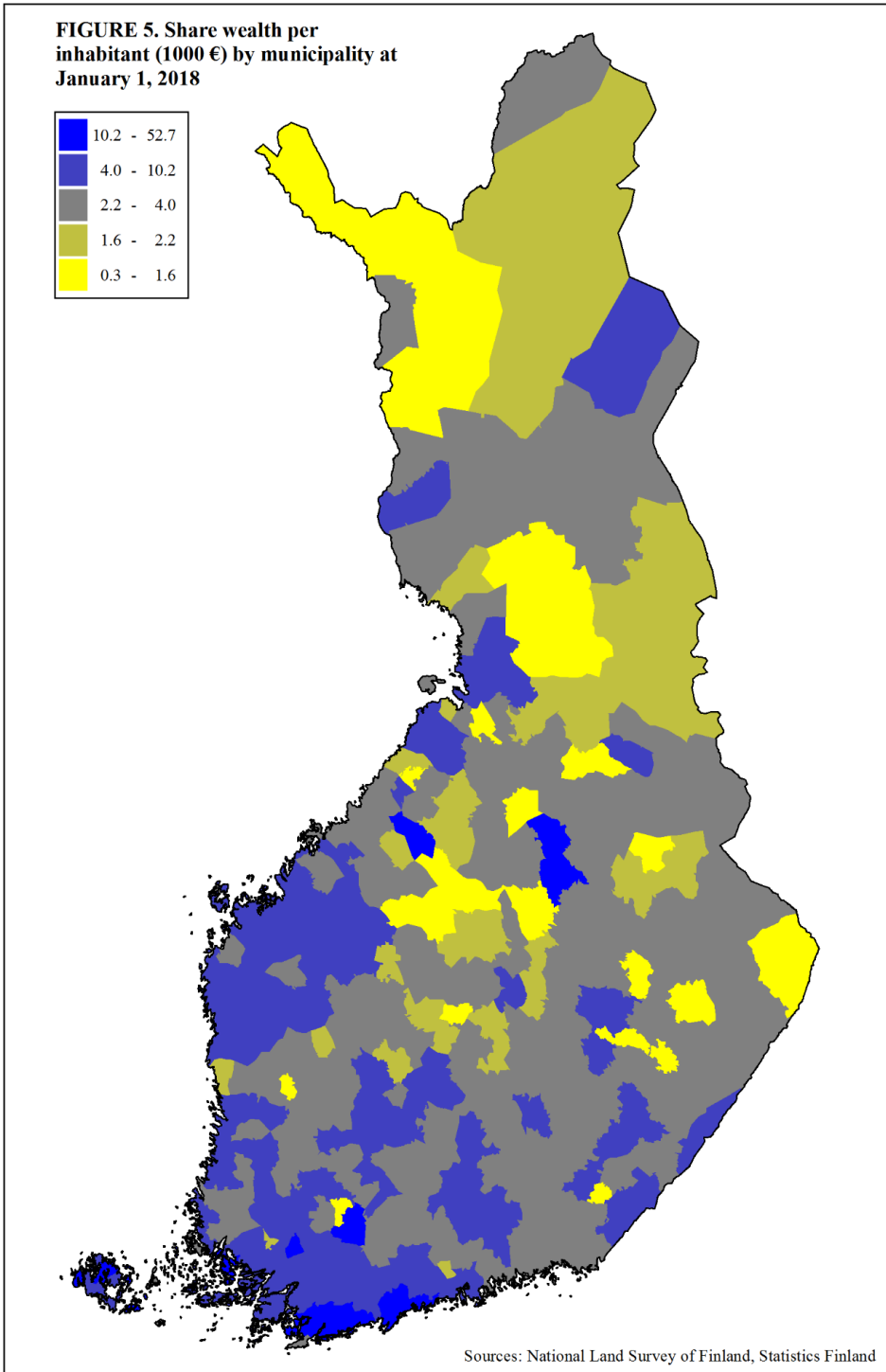
TABLE 4. Shareownership and share wealth by province and municipality group at January 1, 2018

Province or municipality group	Number of shareholders	Number of shareholders / inhabitants	Investors' mean share wealth, 1000 €	Investors' median share wealth, 1000 €	Share wealth / inhabitant, 1000 €	Share wealth, mill. €	Share of share wealth	Share of number of shareholders
<i>Province:</i>								
Uusimaa, excl. Greater Helsinki Area	73,787	14.7 %	44.4	4.9	6.5	3,275	8.9 %	10.4 %
Greater Helsinki Area	228,022	19.7 %	69.2	5.6	13.7	15,769	42.9 %	32.1 %
Varsinais-Suomi	57,520	12.0 %	51.2	6.0	6.2	2,946	8.0 %	8.1 %
Satakunta	22,678	10.3 %	42.3	5.5	4.4	960	2.6 %	3.2 %
Kanta-Häme	18,957	11.0 %	33.2	4.3	3.6	629	1.7 %	2.7 %
Pirkanmaa	63,507	12.4 %	39.2	4.9	4.9	2,489	6.8 %	9.0 %
Päijät-Häme	17,298	8.6 %	50.1	5.5	4.3	866	2.4 %	2.4 %
Kymenlaakso	17,837	10.2 %	33.3	4.9	3.4	593	1.6 %	2.5 %
Etelä-Karjala	11,375	8.8 %	42.9	6.4	3.8	488	1.3 %	1.6 %
Etelä-Savo	12,044	8.2 %	40.1	5.7	3.3	483	1.3 %	1.7 %
Pohjois-Savo	18,948	7.7 %	62.0	5.5	4.8	1,175	3.2 %	2.7 %
Pohjois-Karjala	12,691	7.8 %	37.2	3.9	2.9	473	1.3 %	1.8 %
Keski-Suomi	27,407	9.9 %	29.5	4.8	2.9	807	2.2 %	3.9 %
Etelä-Pohjanmaa	20,971	11.0 %	39.9	5.2	4.4	837	2.3 %	3.0 %
Pohjanmaa	26,438	14.7 %	38.7	3.2	5.7	1,022	2.8 %	3.7 %
Keski-Pohjanmaa	6,574	9.6 %	30.1	3.8	2.9	198	0.5 %	0.9 %
Pohjois-Pohjanmaa	34,264	8.3 %	48.9	4.1	4.1	1,675	4.6 %	4.8 %
Kainuu	5,445	7.4 %	35.7	5.1	2.6	194	0.5 %	0.8 %
Lappi	13,487	7.5 %	34.0	4.9	2.6	459	1.2 %	1.9 %
Ahvenanmaa	7,967	27.0 %	52.4	3.9	14.2	418	1.1 %	1.1 %
Unknown	12,052		84.8	6.2		1,022	2.8 %	1.7 %
Whole country	709,269	12.9 %	51.9	5.2	6.7	36,778	100.0 %	100.0 %
<i>Municipality group:</i>								
Urban municipality	528,335	13.5 %	54.7	5.5	7.4	28,885	78.5 %	74.5 %
Densely populated municipality	91,512	10.9 %	38.8	4.9	4.2	3,552	9.7 %	12.9 %
Rural municipality	77,370	10.4 %	42.9	4.6	4.4	3,318	9.0 %	10.9 %
Unknown	12,052		84.8	6.2		1,022	2.8 %	1.7 %

Table 4 also reports the distribution of share wealth by region. Owing to its large and wealthy population, the Greater Helsinki Area accounts for 43% of individuals' aggregate share wealth, while the rest of Uusimaa accounts for 9% of the share wealth. Varsinais-Suomi and Pirkanmaa represent the next most important wealth concentrations with 8% and 7% of aggregate share wealth, respectively.

Figure 4 gives a more accurate description of the geographical distribution of shareownership by illustrating the number of investors per inhabitant figure at the municipality level. The graph shows a clear concentration in investment activity in Ahvenanmaa, Greater Helsinki Area, Pirkanmaa, Varsinais-Suomi, and Pohjanmaa. Figure 5 finds similar results using the share wealth per inhabitant metric.





3.4. Share wealth by mother tongue

Table 5 investigates how the mother tongue is related to share wealth. The Swedish-speaking minority (5.2% of the Finnish population) is much wealthier than the Finnish-speaking majority (87.9% of the population): the average share wealth of Swedish-speaking Finns owning stocks, 99,000 euros, is about twice that of Finnish-speaking Finns owning stocks, 48,000 euros. The ratio of investor-inhabitants to all inhabitants is also much larger for Swedish-speaking Finns (21%) than for Finnish-speaking Finns (13%). As a result, the average stock wealth of Swedish-speaking Finns (20,300 euros) is more than three times as large as that of Finnish-speaking Finns (6,300 euros). In all, Swedish speakers own 16% of individuals' combined share wealth and account for 18% of millionaires.

TABLE 5. Shareownership and share wealth by mother tongue at January 1, 2018

Mother tongue	Number of shareholders	Number of inhabitants	Investors'			Share of share wealth	Share of number of shareholders	Share of number of millionaires
			Number of shareholders / share	mean wealth, 1000 €	Share wealth / inhabitant, 1000 €			
Finnish	646,775	13.3 %	47.6	6.3	30,764	83.6 %	91.2 %	81.3 %
Swedish	59,327	20.5 %	98.9	20.3	5,867	16.0 %	8.4 %	18.2 %
Other	3,167	0.8 %	46.0	0.4	146	0.4 %	0.4 %	0.6 %

More than 7% of Finns have a mother tongue other than Finnish or Swedish. Yet, their ownership fraction is very small: 0.4% of the total share wealth. Moreover, only 0.8% of them invest in stocks, which is about 6% of the corresponding fraction of Finnish speakers and 4% of that of Swedish speakers. There are at least two potential reasons for this low investment activity. First, many of the non-Finnish or non-Swedish speakers are recent immigrants and may not have money to invest in stocks. Second, the language coded as their mother tongue may not be the real one: a bank or asset manager may not be able to correspond with their customers in other than the Finnish or Swedish language, and may code the language of correspondence (probably Finnish) as the mother tongue of the customer. Doing so would mechanically increase the share of Finnish-speaking investors, and decrease the share of other-language speakers.

3.5. Concentration of individuals' share wealth

Table 6 shows the degree of concentration in individuals' shareownership. The richest 0.01% of individual *investors* (70 individuals) own 13% and the richest 1% (7093 individuals) 48% of the investment wealth of individuals. Similarly, the richest 0.01% of the entire Finnish *population* (551 individuals) owns 25%, and the richest 1% (55,131 individuals) 78% of the investment wealth of individuals. These numbers are probably conservative estimates of the ownership fraction of the wealthiest investors. Wealthy individuals are more likely than others to own stocks via holding companies, whose ownership is not reflected in the analysis of individuals' ownership.

TABLE 6. Proportion of individuals' total share wealth owned by the wealthiest *n* % of investors at January 1, 2018

Percentage	Ownership at percentile (1000 €) of the richest <i>n</i> % of individual investors	Cumulative proportion owned by the wealthiest <i>n</i> % of investors	Cumulative proportion owned by the wealthiest <i>n</i> % of the population
0.01	23,253.9	12.5 %	24.6 %
0.1	3,757.8	26.3 %	45.1 %
0.5	1,072.7	40.2 %	67.2 %
1	641.2	48.1 %	77.8 %
2	367.6	57.3 %	87.5 %
3	258.9	63.2 %	92.2 %
4	199.4	67.6 %	94.8 %
5	160.2	71.0 %	96.5 %
6	132.7	73.8 %	97.6 %
7	112.6	76.2 %	98.4 %
8	97.2	78.2 %	99.1 %
9	85.0	80.0 %	99.5 %
10	74.9	81.5 %	99.8 %
20	29.0	90.6 %	100.0 %
30	14.7	94.5 %	100.0 %
40	8.4	96.7 %	100.0 %
50	5.2	98.0 %	100.0 %
60	4.2	98.9 %	100.0 %
70	2.3	99.5 %	100.0 %
80	1.1	99.8 %	100.0 %
90	0.4	99.97 %	100.00 %

3.6. Stock portfolio diversification

Table 7 describes the diversification of stock portfolios. Most individual investors hold poorly diversified portfolios: 43% of individual investors have only one stock in their portfolio and 16% hold two stocks. The same applies to institutions of which 47% hold only one stock and 12% two stocks. All in all, only 25% of individuals and 29% of institutions hold at least five stocks in their portfolio. Larger portfolios tend to be better diversified than small portfolios. For example, the median size of the portfolio including ten stocks is 44,000 euros, while the median size of a portfolio consisting of five stocks is 16,000 euros.

TABLE 7. Number of stocks in portfolio at January 1, 2018

Number of stocks in portfolio	Portfolio value, 1000 €				Share of investors	
	Individuals		Institutions		Individuals	Institutions
	Mean	Median	Mean	Median		
1	8.8	2.5	370.2	4.9	42.9 %	46.6 %
2	20.4	5.1	1,399.4	17.7	15.9 %	12.2 %
3	38.4	7.9	9,321.1	28.0	9.3 %	6.8 %
4	39.7	11.4	684.1	42.0	6.5 %	5.4 %
5	54.5	15.8	435.2	55.9	4.8 %	4.2 %
6	63.9	20.5	462.6	72.7	3.8 %	3.3 %
7	86.1	25.6	2,438.4	91.6	2.9 %	2.9 %
8	102.3	31.1	910.9	107.9	2.3 %	2.4 %
9	100.6	38.1	592.0	126.8	1.9 %	1.9 %
10	124.9	44.3	497.9	167.4	1.6 %	1.7 %
>10	307.2	94.1	12,273.5	363.6	8.1 %	12.5 %

Table 8 reports the average number of stocks in investors’ portfolios. The average number of stocks held is 3.8 for individuals and 4.6 for institutions. Men’s portfolios tend to be better diversified than those of women, perhaps because their portfolios tend to be larger. Men hold on average 4.3 different stocks, while women hold on average only 3.1 stocks. Appendix 1 lists descriptive statistics on the shareholders of the sample stocks.

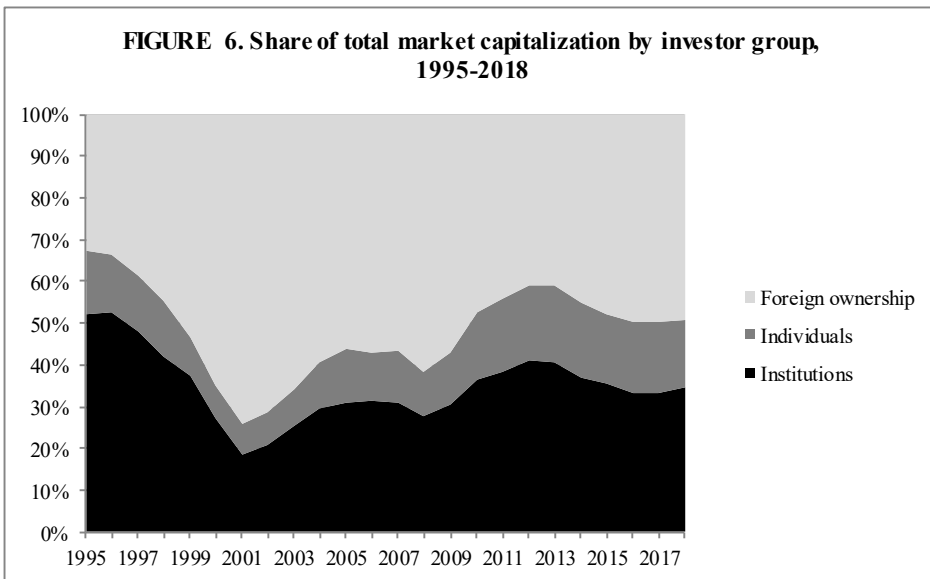
TABLE 8. Portfolio diversification by investor group at January 1, 2018

Investor group	Median portfolio value, 1000 €	Mean number of stocks
Institutions	525.4	4.6
Corporations	63.3	4.3
Financial and insurance corporations	12428.7	9.6
Government and municipalities	35409.5	5.6
Non-profit institutions	364.2	5.3
Individuals	16.6	3.8
Men	19.7	4.3
Women	12.4	3.1

4. Trends in shareownership

4.1. Trends in ownership structure by main investor categories

Figure 6 shows how the distribution of stock ownership has changed across the main investor categories during the sample period. There are large swings in ownership, in particular among foreign investors. Their share increased from 33% to 74% between 1995 and 2001, only to drop to 41% in 2013. After that their share has picked up to 49% in 2018. These swings can be largely attributed to Nokia, whose market capitalization varied greatly during the sample period and which at its peak was more than 90% foreign-owned. Appendix 2 reports the figures depicted in Figure 6 formally as a table.



4.2. Trends in the number of shareholders

Figure 7 shows how the number of investors has changed during our sample period. This number increased from 475,000 in 1997 to 746,000 in 2000 because of a flurry of initial public offerings and listings, and because Sampo joined the share registry. After the year 2000, the number of shareholders has varied much less. In 2018, 708,000 individuals owned shares.

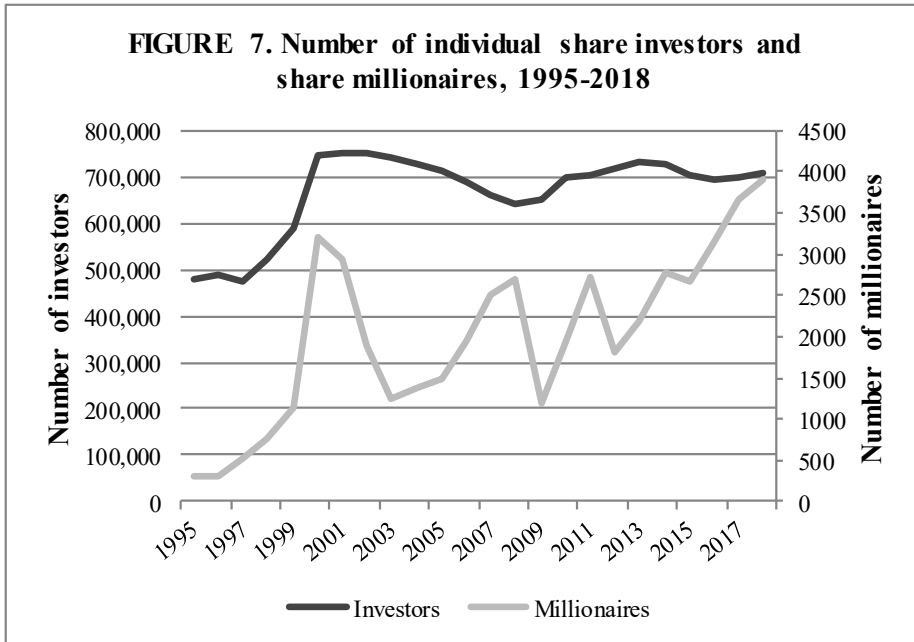


Figure 7 also reports how the number of millionaires has fluctuated during our sample period. Here, the key determinant of the fluctuation is the change in market prices. For example, the number of millionaires halved during 2008, the peak year of the financial crisis. The number of millionaires has increased significantly after 2015, and in 2018 it was 3904, the largest during the sample period. Then, 486 investors owned stocks worth at least five million euros. Appendix 3 reports more details of the time-series variation of the number of investors at various parts of the wealth distribution.

4.3. Trends in shareownership concentration

Figure 8 reports the fraction of share wealth owned by four investor categories: 1) the wealthiest 0.01% of investors, 2) the wealthiest 0.1% of investors (excluding the top 0.01% of investors), 3) the wealthiest 0.5% of investors (excluding the top 0.1% of investors), and 4) the wealthiest 1% of investors (excluding the top 0.5% of investors). Of these four investor categories, the wealthiest one exhibits the most variation during the sample period – perhaps because the group is the smallest and its shareholdings are probably the least well diversified. The group’s ownership fraction more than doubled from 8% in the year 1995 to 19% in the year 2004 and decreased to 11% in 2013. After that, the share has increased again, and it was 13% in 2018. The ownership shares of the three other high-wealth groups have also increased since 2015 or 2016 after years of decline.

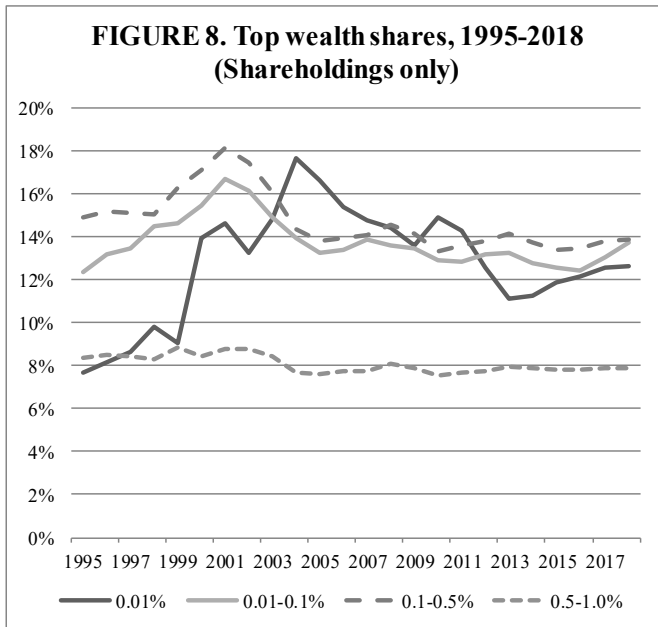
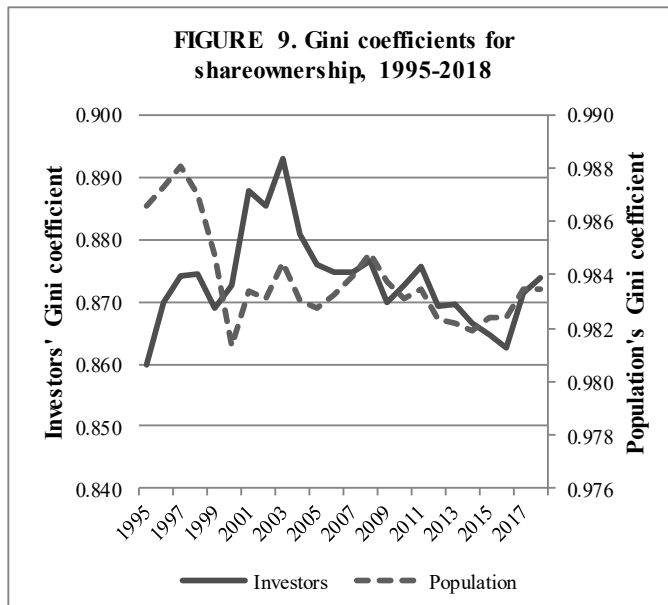
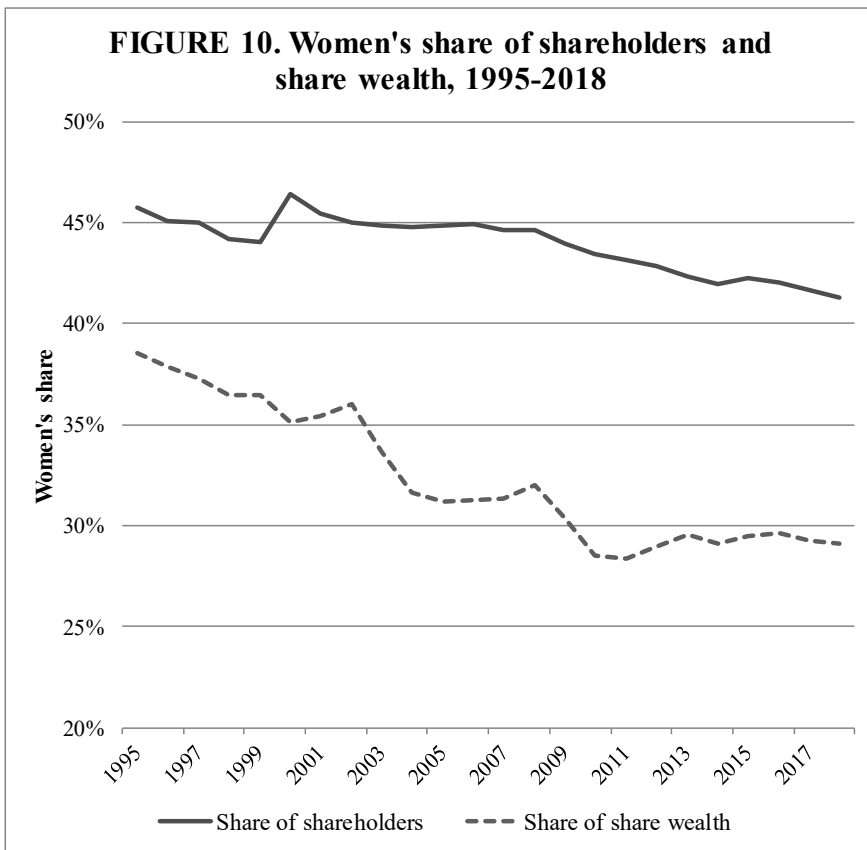


Figure 9 shows how the concentration of ownership has evolved over time. A useful summary measure of ownership concentration is the gini coefficient. By definition, the gini coefficient varies between 0 and 1, with larger numbers indicating larger degrees of concentration. Figure 9 shows that individual investors' shareownership concentration increased almost monotonically from 1995 to 2003, and decreased almost monotonically from 2003 to 2016. The coefficient has again clearly increased since 2016. In 2018, its value (0.983) corresponded to its level in 2010. Appendix 4 reports the results depicted in Figure 9 as a table.



4.4. Trends in shareownership by sex

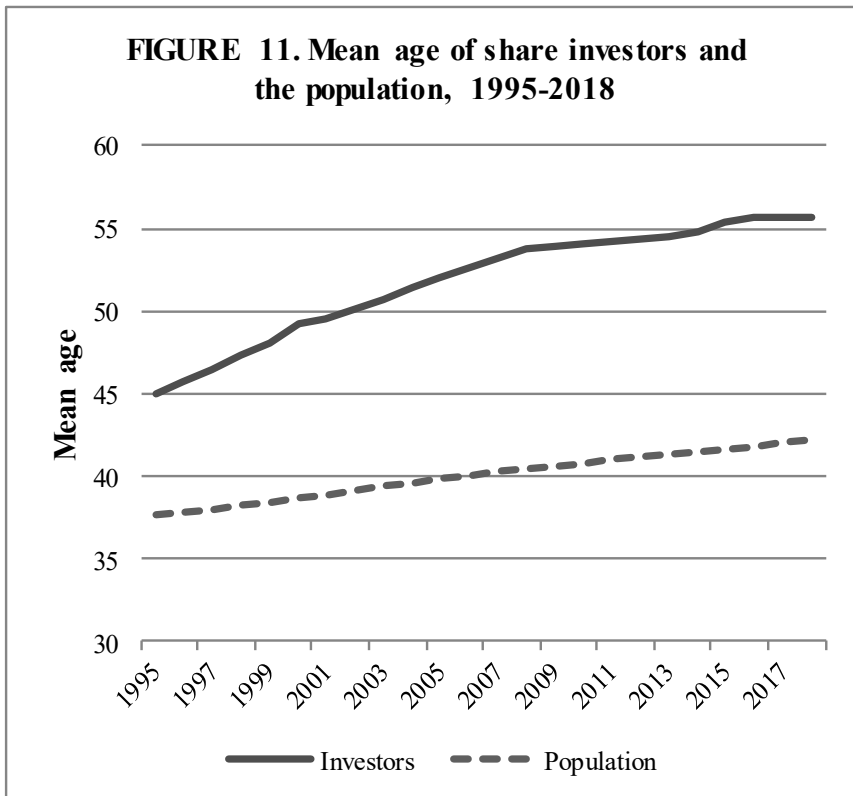
Figure 10 illustrates women's share of shareholders and share wealth over time. Women represented 46% of investors in 1995, but since then their share has been decreasing in a trend like fashion except for 1999 when Elisa listed on the stock exchange; women were unusually well-represented among Elisa's shareholders. By 2018, women's share had decreased to 41%. Women's share of total share wealth has decreased even more. While women accounted for 39% of individuals' share wealth in 1995, their share decreased to 29% by 2018. Appendix 5 reports the results depicted in Figure 10 as a table.



What explains these patterns? We can think of at least the following explanations for the differences in the growth rates of men and women. First, Keloharju et al. (2012) find that women invest relatively more in mutual funds than men. As mutual funds have become more popular, women may have channeled a relatively larger fraction of their assets to indirect shareholdings. Second, men tend to earn more than women. If this allows them to save more, and if these savings are channeled to direct shareholdings, their portfolios can grow faster. Third, men may earn a higher return on their portfolios than women. We consider this unlikely, as Barber and Odean (2001) find stock portfolios of men to underperform those of women after transaction costs.

4.5. Trends in the mean age of investors and the population

Figure 11 illustrates the development of the mean age of investors and the population. In 1995 investors' mean age was 45 years, while that for the population was 38 years. In 2018 the corresponding ages were 56 and 42 years, respectively. In other words, Finns have become on average five years older during the past 23 years, while the corresponding change for investors is 11 years. Investors' aging rate has decreased over time. Shareholders aged on average by 0.7 years per year up to the year 2008. After that, they have aged by 0.2 years per year, i.e. at about the same rate as the population as a whole.



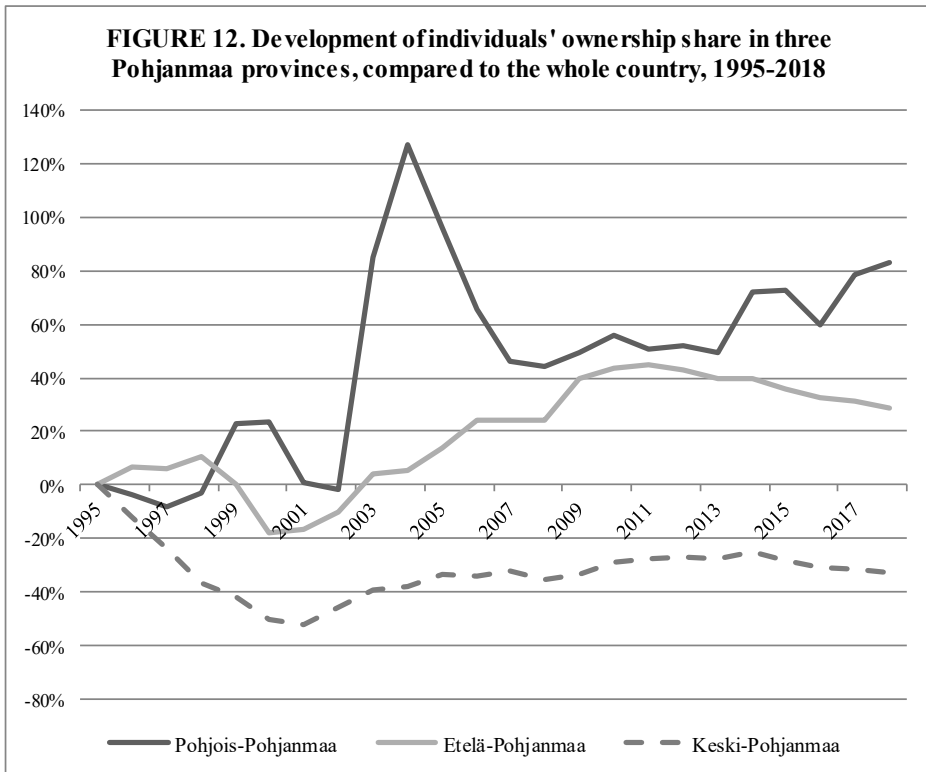
4.6. Trends in shareownership structure by region

Table 9 examines trends in ownership patterns by region, focusing on the changes in their ownership fractions between the beginning and the end of the sample period. Pohjois-Pohjanmaa and Pohjois-Savo increased their ownership share most by 83% and 72%, respectively. They are followed by Etelä-Pohjanmaa and Uusimaa (excluding Greater Helsinki Area) with 29% and 16% growth rates. On the other hand, Keski-Pohjanmaa’s share has decreased by 33%, and Ahvenanmaa’s and Etelä-Karjala’s shares have decreased by 12 and 11 percent, respectively. Appendix 6 reports details of region-level ownership in each sample year.

TABLE 9. Share of share wealth by province, individual investors, 1995-2018

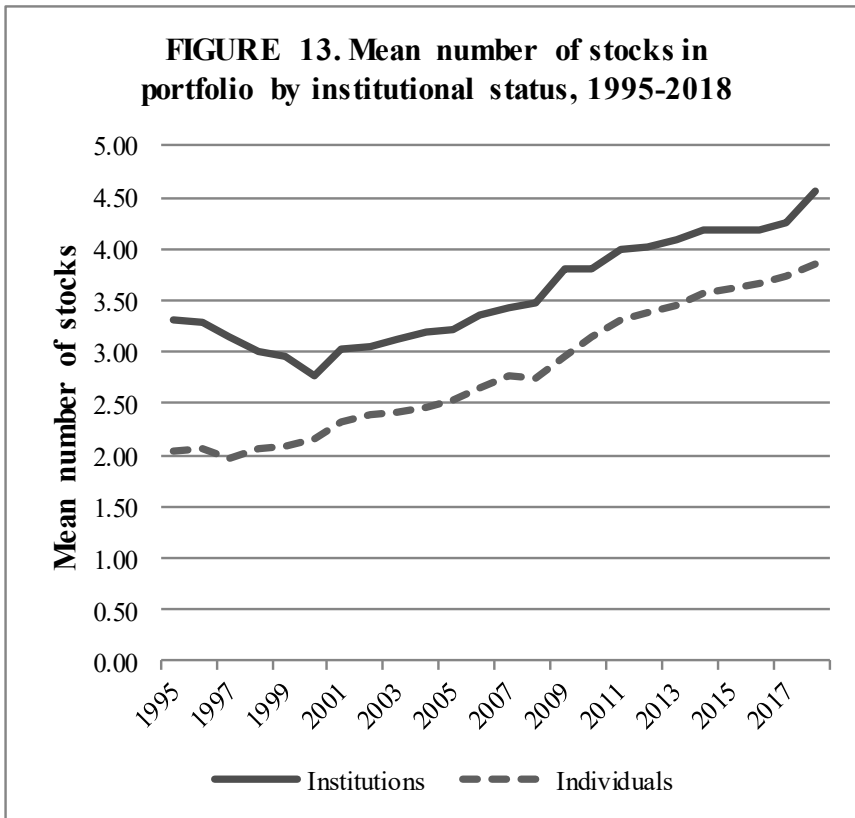
Province	Province's ownership share		Change, %
	1995	2018	
Uusimaa, excl. Greater Helsinki Area	7.7%	8.9%	16 %
Greater Helsinki Area	46.6%	42.9%	-8 %
Varsinais-Suomi	8.9%	8.0%	-10 %
Satakunta	2.6%	2.6%	0 %
Kanta-Häme	1.7%	1.7%	2 %
Pirkanmaa	6.9%	6.8%	-1 %
Päijät-Häme	2.5%	2.4%	-4 %
Kymenlaakso	1.7%	1.6%	-6 %
Etelä-Karjala	1.5%	1.3%	-11 %
Etelä-Savo	1.3%	1.3%	2 %
Pohjois-Savo	1.9%	3.2%	72 %
Pohjois-Karjala	1.2%	1.3%	6 %
Keski-Suomi	2.2%	2.2%	1 %
Etelä-Pohjanmaa	1.8%	2.3%	29 %
Pohjanmaa	2.7%	2.8%	3 %
Keski-Pohjanmaa	0.8%	0.5%	-33 %
Pohjois-Pohjanmaa	2.5%	4.6%	83 %
Kainuu	0.6%	0.5%	-4 %
Lappi	1.4%	1.2%	-8 %
Ahvenanmaa	1.3%	1.1%	-12 %
Unknown	2.5%	2.8%	11 %
Whole country	100.0%	100.0%	0 %

The most surprising results in Table 9 relate to the neighboring provinces of Pohjois-, Keski-, and Etelä-Pohjanmaa. Here, Pohjois-Pohjanmaa’s share has increased more than that of any other province, and Etelä-Pohjanmaa’s share a good deal, while Keski-Pohjanmaa’s share has decreased more than that of any other province. We illustrate the development of the three provinces’ shares in Figure 12 by indexing their shares in 1995 to 0 and following the share’s relative changes in the years following that. The figure suggests that the annual variation in Etelä- and Keski-Pohjanmaa’ share is fairly similar; the key difference between the provinces appears to be their different growth rates. Pohjois-Pohjanmaa’s relative share fluctuates much more than those in Etelä- and Keski-Pohjanmaa, and its average trend is also larger. The listings and success of many information technology companies in the Oulu area have possibly contributed to Pohjois-Pohjanmaa’s positive trend. The province’s relative share more than doubled in 2002 and 2003. After that its relative share has decreased by 19%.



4.7. Trends in stock portfolio diversification

Individuals' portfolios have become better diversified over time. Figure 13 shows that the average number of stocks held by individuals increased from 2.0 in 1995 to 3.8 in 2018. Institutional portfolios have also become better diversified, but their development has been less smooth. The average number of stocks in institutional portfolios decreased during the first five sample years from 3.3 to 2.8, but after that, the average has increased to 4.6 in 2018.



We can only speculate what accounts for the increase in the average number of stocks in individuals' portfolios. One possibility is that these portfolios have become larger over time, encouraging investors to diversify them better. It is also possible that investors' financial literacy has increased over time, and they have learned to appreciate the benefits of diversification. Yet another possibility is that investors with poorly diversified portfolios have liquidated their stock positions. Many of these portfolios stem from demutualizations of Sampo and local telephone companies, not from active purchase decisions, so the investors may have been less keen to hold on to these positions than investors on average.

5. Holding periods

We estimate the duration of a holding period from spells where an investor starts a new holding in a stock and then completely liquidates that holding. Thus, our holding period calculations do not take into account events where an investor acquires more of a stock she already owns or sells part of her portfolio. This procedure, which follows the practice of Feng and Seasholes (2005), has the benefit of greatly simplifying the calculation of the holding period length. While this will make the measured holding periods longer than for positions built up

or liquidated gradually, it is less clear whether this simplification has any significant effect on the comparability of the holding periods for different transaction types, investor groups, or other partitions of the data.

5.1. Holding period by transaction type

We begin our analysis by comparing the holding periods of six different transaction types, which we divide into active and passive transactions. Active transactions refer to events whether an investor has wilfully acquired stock by herself. Passive transactions refer to events where the investor has received a stock without affecting the outcome herself. We expect investors to sell actively acquired stocks sooner than passively acquired stocks. For comparability purposes, along with the fact that some transaction types (such as inheritances) do not apply equally to all investor types, we narrow our analysis to individual investors.

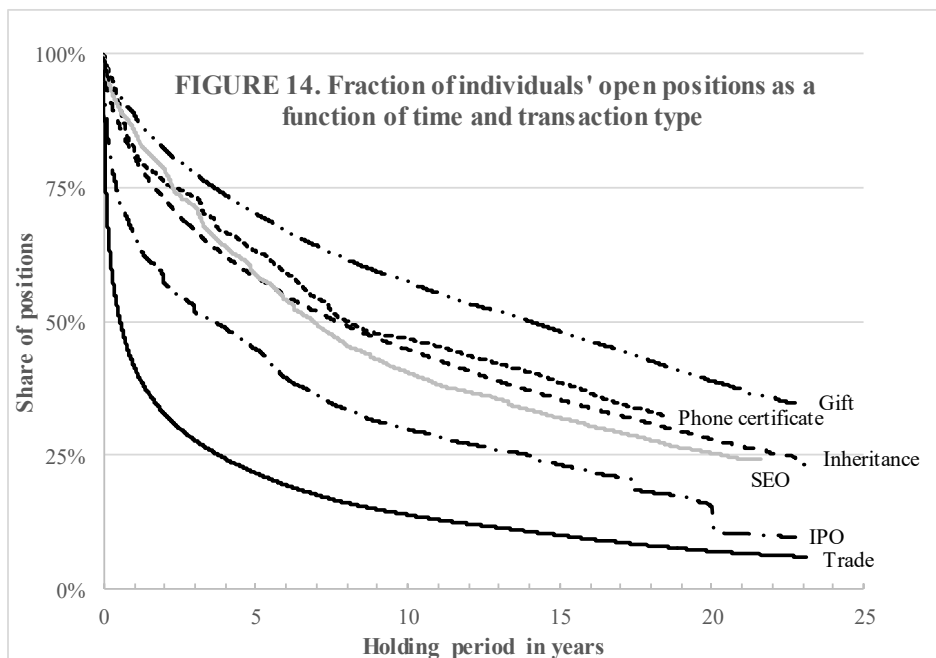


Figure 14 depicts the results of a Kaplan-Meier analysis. The analysis reports how large fraction of the initial positions remains open as a function of time from the opening of the position. We find that actively acquired stock positions tend to have considerably shorter holding periods than passively acquired ones. Ordinary stock market trades, depicted with a black solid line, have by far the shortest holding periods, as shown by the fact that the line is well below all the other lines in the figure. By trading day 17, one-quarter of the positions acquired by an individual via a regular stock exchange trade has been closed. The median holding period is 135 trading days, i.e. a bit over half a year. The right tail is long, however. By trading day 935, or 3.8 years, only three-quarters of the positions have been closed. Table 10 reports the key results of the figure in numbers.

TABLE 10. Holding period by transaction type, 1995-2017

The holding periods are calculated from individual investors' transactions.

Transaction type	Trading days since position opening		
	Share of positions liquidated		
	25%	50%	75%
Actively acquired stocks:			
Stock market trade	17	135	949
Initial public offering	104	910	3503
Seasoned equity offering	568	1721	5106
Passively acquired stocks:			
Demutualization	591	2001	N.A.
Inherited	422	1917	5613
Gift	912	3512	N.A.

The acquisition type with the second-shortest holding period is initial public offerings (IPOs). The figure depicts IPO investments as the second-lowest curve. Although some individual investors appear to invest in IPOs just to make a quick trade, this does not represent the overall experience. The median holding period is 910 trading days, or 3.6 years. Thus, IPO investments tend to have far longer holding periods than regular trades in the open market.

The third-shortest holding periods apply to positions acquired from seasoned equity offerings. These positions, depicted in the figure with a gray solid line, refer to participation in general cash offerings and thus exclude rights offerings, where the investor generally already owns the stock. The median holding period is 1721 trading days, or 6.9 years.

All aforementioned transaction types refer to actively acquired positions. We consider three types of passively acquired positions. Inherited stocks and stocks received from demutualizations of telephone companies (see, for example, Kaustia, Knüpfer, and Torstila, 2016) have similar median holding periods, 1917 and 2001 trading days, respectively. Thus, both of them have somewhat longer holding periods than the active transaction type with the longest holding period, seasoned equity offerings. Stocks belonging to the third passively acquired category, gifts, are held much longer than the two other categories: their median holding period is 3512 trading days, or 14 years. We may only speculate about the reason for this long holding period, and in particular, the difference to another fundamentally similar category, inherited stocks. We suspect the difference arises from whether the donor of the stocks likely is alive (gift) or not (inheritance). The receiver of a stock gift might be concerned that selling the position offends the donor, which is less of a concern for inherited stocks.

5.2. Holding period by institutional status

Table 11 describes holding periods by institutional status. To facilitate comparability, we confine the analysis to stock exchange trades, i.e. the largest transaction category. The holding periods vary a lot by institutional status. Finance and insurance companies have by far the shortest holding periods (median: 6 trading days). The groups with the next-shortest holding periods are foreign investors (median: 55 trading days), non-financial corporations (median: 62 trading days), and individual investors (median: 135 trading days). The longest holding periods apply to the general government (median: 302 trading days) and non-profit organizations (542 trading days). The long holding periods for non-profit organizations may be explained by these institutions' concern of losing their tax-free status if they trade frequently.

TABLE 11. Holding period by investor category, 1995-2017

The holding periods are calculated from stock market trades.

Investor category	Trading days since position opening		
	Share of positions liquidated		
	25%	50%	75%
Domestic			
Institutions			
Corporations	9	62	343
Financial and insurance corporations	2	6	60
Government and municipalities	75	302	930
Non-profit institutions	108	542	2266
Individuals	17	135	949
Foreign			
Privately registered	6	55	578

5.3. Holding period of trades by position and portfolio size

Table 12 Panel A analyzes the holding periods of individuals' trades by the size of the holding. We find that the holding period decreases monotonically in holding size. For example, the bottom quintile of positions has a median holding period of 501 days, whereas for the top quintile the holding period is only 43 days.

Panel B studies the holding periods by portfolio size. The link between the holding period and size is less pronounced than that for position size, and not fully monotonic.

TABLE 12. Holding period by position or portfolio size quintile, 1995-2017

The holding periods are calculated from individual investors' stock market trades. Position and portfolio size quintiles are determined by comparing them to individuals' other positions or portfolio sizes in the month of the opening of the trade.

Size quintile	Trading days since position opening		
	Share of positions liquidated		
	25%	50%	75%
<i>Panel A: Position size quintile</i>			
Smallest	83	501	2249
Quintile 2	48	308	1627
Quintile 3	22	159	1066
Quintile 4	12	88	630
Largest	6	43	307
<i>Panel B: Portfolio size quintile</i>			
Smallest	52	367	2011
Quintile 2	20	169	1233
Quintile 3	14	111	851
Quintile 4	12	91	634
Largest	15	106	642

5.4. Holding period of trades by socioeconomic characteristics

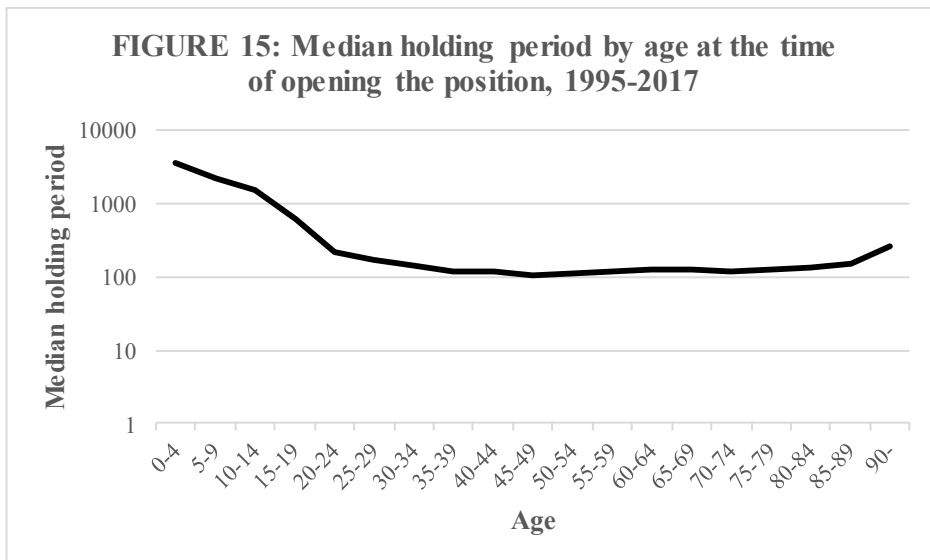
Table 13 analyzes the holding periods of individuals' trades by socioeconomic characteristics. Panel A divides the sample based on sex. We find that men's median holding period is 109 days, while it is 374 days for women. The much shorter periods for men are consistent with Barber and Odean (2001) who find that men trade more than women. In part, this result may also reflect the fact that men have on average larger portfolios than women.

TABLE 13. Holding period by socioeconomic characteristics, 1995-2017

The holding periods are calculated from individual investors' stock market trades. Age and region are assessed at the time of opening the position.

Investor category	Trading days since position opening		
	Share of positions liquidated		
	25%	50%	75%
<i>Panel A: Sex</i>			
Men	14	109	744
Women	46	374	2187
<i>Panel B: Age</i>			
90-	47	262	954
85-89	16	154	837
80-84	15	135	923
75-79	15	129	921
70-74	14	117	873
65-69	15	122	879
60-64	15	122	898
55-59	15	121	879
50-54	14	112	836
45-49	13	105	772
40-44	15	115	786
35-39	15	116	784
30-34	20	140	884
25-29	27	169	970
20-24	35	217	1192
15-19	75	604	2577
10-14	248	1548	4253
5-9	380	2223	5047
0-4	734	3476	N.A.
<i>Panel C: Mother tongue</i>			
Finnish	17	130	926
Swedish	34	242	1426
Other	10	83	632
Investor category	Trading days since position opening		
	Share of positions liquidated		
	25%	50%	75%
<i>Panel D: Region</i>			
Uusimaa, excl. Greater Helsinki Area	15	129	960
Greater Helsinki Area	19	148	1016
Varsinais-Suomi	21	153	1009
Satakunta	16	116	805
Kanta-Häme	16	128	941
Pirkanmaa	20	148	995
Päijät-Häme	18	130	851
Kymenlaakso	18	143	1009
Etelä-Karjala	18	138	923
Etelä-Savo	15	115	851
Pohjois-Savo	15	120	893
Pohjois-Karjala	12	94	732
Keski-Suomi	16	118	801
Etelä-Pohjanmaa	15	118	935
Pohjanmaa	16	134	1053
Keski-Pohjanmaa	16	111	842
Pohjois-Pohjanmaa	15	116	855
Kainuu	13	107	893
Lappi	12	96	751
Ahvenanmaa	28	196	1105

Panel B splits the sample by age. Young investors tend to hold stocks longer than others. The median holding period is almost 3500 days (i.e., 14 years) for individuals who were less than five years old at the time of the trade. This result reflects the fact that very young investors cannot have executed the trades by themselves. The holding periods shorten with age as the investors are more likely to have executed the trades by themselves. Yet, even for investors who are between 20 and 24 years old, the median holding period is 217 trading days. This is more than double that for 45-49 year olds who have the shortest median holding period, 105 trading days. As investors age, the holding periods lengthen again. This is particularly clear for investors who are over 90 years old and who have a median holding period of 262 trading days. Figure 15 illustrates the relationship between age and median holding period.



Panel C divides the sample according to the mother tongue. The holding periods of Swedish speakers (median: 242 trading days) are much longer than those of Finnish speakers (median: 130 trading days). It is possible that part of this difference can be accounted for by foreign investors misclassified as Finnish speakers. Foreigners tend to trade more frequently, as is suggested by the fact that individuals with a corresponding language other than Finnish or Swedish tend to have the shortest median holding period, 83 days. However, we also know that privately registered foreign investors account for a relatively small fraction of all holdings, so their trading activity likely is just a partial explanation to the difference. Note that the trading activity difference between Finnish speakers and Swedish speakers does not appear to be driven by their wealth difference. Swedish speakers tend to be wealthier than Finnish speakers, and wealthier investors tend to trade more actively.

Panel D divides the sample by province. The median holding period is the lowest in Pohjois-Karjala, Lappi, and Kainuu (94-107 trading days) while it is by far the highest in Ahvenanmaa (196 trading days).

5.5. Holding period of trades by year

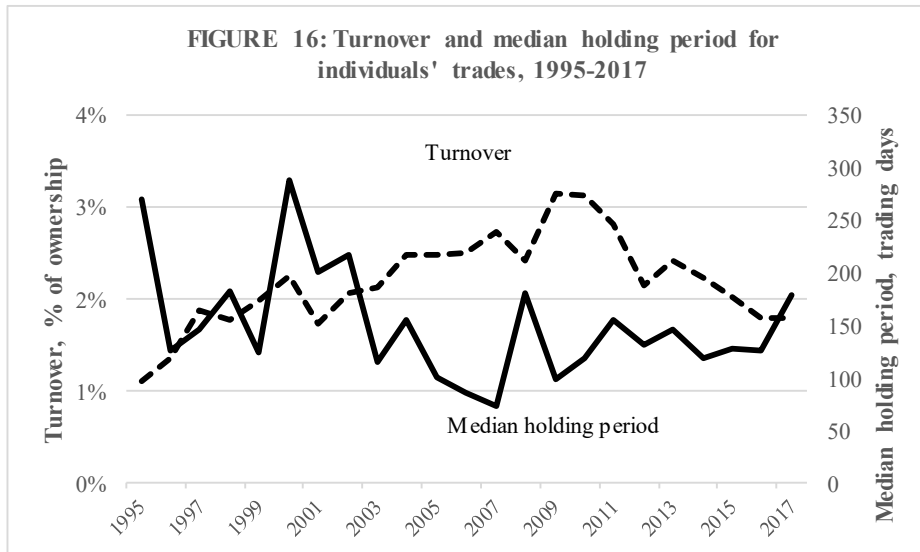
Table 14 analyzes the holding periods of individuals' trades by year. As a rule, these holding periods tended to be the highest at the beginning and end of the sample period and during the bear markets in 2000–02 and 2008, and the lowest in the middle, in 2006 and 2007. For example, the median trade executed by an individual investor in 1995 had a holding period of 269 trading days, whereas that executed in 2007 had a holding period of only 73 trading days. With the onset of the financial crisis in 2008 and the negative returns associated with this crisis, the median holding period increased to 180 trading days. The burst of the technology bubble in 2000–02 and the financial crisis may have increased investors' holding periods because of their reluctance to realize losses (Odean, 1998).

Figure 16 shows that there is a negative relation ($r = -0.47$) between individual investors' median holding period and their portfolio turnover. The correlation between the bottom quartile of the holding period and turnover is even higher ($r = -0.67$).

TABLE 14. Holding period by year of opening the position, 1995-2017

The holding periods are calculated from individual investors' stock market trades.

Year of opening the position	Trading days since position opening		
	Share of positions liquidated		
	25%	50%	75%
1995	74	269	756
1996	35	126	487
1997	43	145	648
1998	37	183	886
1999	29	124	1252
2000	24	288	1785
2001	15	201	1205
2002	18	216	908
2003	21	114	631
2004	27	154	557
2005	20	101	425
2006	14	85	394
2007	10	73	871
2008	11	180	1303
2009	12	98	897
2010	17	118	1006
2011	14	154	1063
2012	13	132	755
2013	19	146	1006
2014	16	118	798
2015	13	128	685
2016	16	125	N.A.
2017	28	178	N.A.



6. Conclusions

This study documents patterns in the direct ownership of Finnish shares at the beginning of 2018 and changes in shareowner patterns since the beginning of 1995. Our main findings are as follows:

- Finnish listed companies have altogether about 747,000 Finnish investors. Of them 707,000 are individuals. Structured securities and derivatives have 139,000 investors.
- Domestic investors own about half of the stock market capitalization. Among domestic investor categories, individual investors are the largest investor category, accounting for 16% of the stockholdings. Among domestic institutional owners, the largest shareholders are government and municipalities, and non-financial corporations. Both of them own 14% of the stock market capitalization.
- The median individual investor stock portfolio is worth 5200 euros. The average stock portfolio is much larger: 52,000 euros.
- Women account for 41% of shareholders, 29% of individuals' combined investment wealth, and 26% of share millionaires.
- Investment wealth tends to be concentrated on the more senior citizens. Investors are on average about 14 years older than the population on average. Wealthy investors are even older.
- There are substantial differences in the relative frequency of investor-inhabitants across provinces. In Ahvenanmaa, 27% of the inhabitants own stocks. The national average is 13%. The differences in investment wealth per investor across provinces are smaller.
- Inhabitants of Uusimaa own 52% of individuals' combined share wealth. Varsinais-Suomi and Pirkanmaa represent the second- and third-most important concentrations of share wealth with 8% and 7% ownership fractions, respectively.
- The Swedish-speaking minority owns more than three times as much directly owned

stock wealth as is their population share. Swedish speakers are 60% more likely to invest in stocks than Finnish speakers, and their portfolios are on average twice as large as those of Finnish speakers.

- The wealthiest 0.01% of individual investors own 13% of the directly owned share wealth of individuals. The wealthiest 1% of individual investors owns 48% of the directly owned share wealth of individuals.
- At the beginning of 2018, there were 3904 investors with a stock portfolio worth at least one million euros, and 446 investors with a stock portfolio worth at least five million euros.
- Most investors hold poorly diversified stock portfolios: only 25% of individuals and 29% of institutions hold at least five stocks in their portfolio. The average number of stocks held is 3.8 for individuals and 4.6 for institutions.
- Individuals' direct shareownership became more concentrated between 2016 and 2018. Before that, the shareholdings became less concentrated for over a decade.
- Women's share of shareholders and shareholdings have decreased over time. Their share of the number of investors decreased from 46% in 1995 to 41% in 2018. Women's ownership share decreased even more during the same period: from 39% to 29%.
- Shareholders' mean age increased by 11 years during the sample period. At the same time, the mean age of the population increased by five years.
- Actively acquired stock positions tend to have shorter holding periods than passively acquired ones. Among actively acquired positions, stocks acquired from stock exchange trades have shorter holding periods than stocks acquired from initial public offerings or seasoned equity offerings.
- Men's and Finnish speakers' trades tend to have shorter holding periods than those of women and Swedish speakers. Middle-aged investors have shorter holding periods than older and especially younger investors. Larger positions have shorter holding periods than smaller ones.
- The holding periods were at their longest at the beginning and end of the sample period and during the bear markets in 2000–02 and 2008, and at their shortest before the financial crisis of 2008.

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APPENDIX 1. Descriptive statistics of the ownership of shares listed on the Nasdaq OMX Nordic Helsinki Stock Exchange at January 1, 2018

Share class	Market value, mill. €	# privately registered investors	Proportion of shares owned by			Proportion of individual investors who are		Mean age
			Domestic investors		Foreign investors	Men	Finnish sp.	
			Institutions	Individuals				
Afarak Group	237	6,523	7%	13%	80%	81%	96%	50
Affecto	106	672	5%	2%	94%	74%	96%	45
Ahlstrom-Munksjö	1,752	11,520	13%	37%	50%	67%	90%	57
Aktia Bank A	369	39,472	69%	24%	7%	65%	42%	58
Aktia Bank R	206	840	99%	1%	0%	71%	58%	60
Alma Media	580	8,255	83%	13%	4%	68%	96%	56
Amer Sports	2,718	25,879	38%	13%	49%	68%	94%	51
Apetit	85	11,158	43%	52%	5%	74%	95%	60
Asiakastieto Group	361	2,463	59%	6%	36%	73%	94%	53
Aspo	309	9,060	37%	60%	3%	73%	93%	56
Aspocomp Group	16	2,957	42%	51%	7%	77%	94%	53
Atria A	231	12,513	61%	26%	13%	73%	96%	55
Bank of Åland A	87	5,367	61%	26%	12%	52%	15%	58
Bank of Åland B	125	8,359	43%	39%	18%	54%	25%	56
Basware	689	11,677	26%	26%	48%	61%	91%	55
Biohit B	45	6,643	23%	71%	6%	71%	96%	51
Bittium	225	21,998	28%	67%	5%	75%	96%	51
CapMan Plc	258	16,229	46%	44%	9%	74%	94%	50
Cargotec	2,593	21,506	47%	17%	37%	68%	91%	55
Caverion	786	28,559	46%	18%	36%	70%	94%	54
Citycon	1,923	15,370	12%	6%	83%	76%	96%	48
Componenta	26	7,678	39%	59%	2%	85%	96%	47
Consti Yhtiöt	67	3,461	51%	35%	14%	78%	97%	49
Cramo	881	12,159	27%	15%	58%	76%	92%	53
Digia	65	5,898	58%	36%	5%	77%	96%	50
Digitalist Group	39	3,903	83%	10%	6%	84%	96%	46
DNA	2,071	13,296	77%	4%	19%	77%	97%	55
Dovre Group	27	3,379	28%	38%	34%	80%	95%	50
Efore	24	3,824	57%	31%	12%	77%	96%	52
Elester A	20	1,086	58%	41%	1%	78%	96%	53
Elisa	5,456	191,698	29%	26%	45%	49%	94%	65
Endomines	4	2,126	28%	62%	11%	86%	95%	48
eQ	310	5,039	50%	20%	30%	73%	93%	55
Etteplan	193	2,663	86%	13%	2%	78%	96%	50
Evli Pankki	75	3,031	60%	28%	12%	78%	94%	51
Exel Composites	75	3,160	41%	20%	39%	79%	96%	50
Finnair	1,661	16,231	71%	10%	19%	69%	95%	51
Fiskars	1,892	19,530	62%	35%	3%	64%	89%	53
Fortum	14,634	127,335	59%	10%	31%	67%	94%	53
F-Secure	619	22,011	29%	52%	20%	71%	94%	51
Glaston	91	5,565	52%	27%	20%	78%	92%	51
HKScan A	155	12,206	55%	25%	19%	79%	96%	55
Honkarakenne B	21	2,513	57%	41%	2%	75%	96%	51
Huhtamäki	3,737	30,432	35%	15%	49%	63%	92%	55
Ilkka-Yhtymä 1	16	3,637	32%	67%	1%	69%	100%	67
Ilkka-Yhtymä 2	71	6,899	45%	52%	3%	69%	98%	62
Incap	200	2,483	5%	4%	91%	86%	97%	44
Innofactor	34	12,363	13%	76%	10%	77%	95%	51
Investors House	46	2,507	77%	23%	0%	74%	96%	53
Kamux	291	1,456	56%	29%	16%	84%	96%	48
Kemira	1,812	35,592	56%	18%	26%	69%	93%	55
Keskisuomalainen A	55	2,397	11%	89%	1%	68%	99%	58
Kesko A	1,376	8,404	78%	19%	2%	61%	94%	57
Kesko B	3,107	36,389	27%	29%	45%	59%	91%	58
Kesla A	11	1,469	31%	67%	3%	79%	96%	54
KONE	20,159	61,163	35%	13%	52%	63%	93%	52
Konecranes	2,999	19,993	29%	11%	60%	70%	92%	54
Kotipizza Group	89	2,941	39%	12%	50%	80%	96%	43
Lassila & Tikanoja	678	12,200	48%	32%	21%	69%	94%	54
Lehto Group	737	8,967	57%	29%	14%	79%	97%	50

Share class	Market value, mill. €	# privately registered investors	Proportion of shares owned by			Proportion of individual investors who are		Mean age
			Domestic investors		Foreign investors	Men	Finnish sp.	
			Institutions	Individuals				
Lemminkäinen	532	3,925	53%	38%	8%	72%	94%	56
Marimekko	82	7,567	49%	40%	11%	42%	94%	52
Martela A	26	4,278	33%	65%	3%	79%	97%	47
Metso	4,235	45,353	36%	12%	52%	65%	91%	57
Metsä Board A	256	5,333	92%	7%	0%	70%	94%	55
Metsä Board B	2,276	43,328	59%	19%	22%	72%	92%	62
Neo Industrial	29	11,654	58%	40%	2%	80%	91%	62
Neste	13,667	63,093	60%	9%	32%	67%	93%	57
Nokia	22,692	247,729	13%	8%	79%	68%	94%	51
Nokian Tyres	5,232	39,024	16%	11%	74%	70%	94%	53
Nordea Bank FDR	4,641	209,377	41%	53%	7%	56%	93%	56
Nurminen Logistics	24	1,189	64%	34%	2%	82%	96%	50
Olvi A	506	10,801	32%	38%	30%	73%	95%	53
Orava Residential REIT	48	4,890	46%	52%	3%	77%	97%	48
Oriola A	171	11,780	50%	45%	5%	55%	94%	57
Oriola B	352	26,560	46%	34%	20%	58%	93%	57
Orion A	1,184	18,239	31%	66%	3%	57%	94%	55
Orion B	3,204	44,872	16%	30%	54%	59%	93%	56
Outokumpu	3,284	67,512	43%	19%	38%	75%	95%	52
Outotec	1,329	25,501	45%	14%	41%	73%	94%	51
Panostaja	53	4,198	40%	60%	0%	79%	97%	49
Pihlajalinna	275	12,481	68%	22%	11%	71%	98%	49
Uutechnic Group	20	1,456	23%	69%	8%	82%	96%	49
Pohjois-Karjalan Kp.	102	950	49%	51%	0%	69%	98%	60
Ponsse I	748	12,594	15%	80%	5%	76%	97%	51
Pöyry	293	4,907	45%	7%	48%	71%	93%	52
QPR Software	21	1,243	53%	36%	11%	77%	96%	47
Qt Group	124	3,997	59%	39%	2%	76%	95%	51
Raisio K	122	9,897	21%	79%	0%	73%	91%	63
Raisio V	507	36,543	26%	47%	27%	70%	94%	57
Ramirent	851	15,488	30%	13%	57%	74%	94%	54
Rapala VMC	127	3,545	21%	6%	74%	79%	97%	48
Raute A	95	4,769	14%	80%	6%	73%	96%	52
Restamax	144	2,774	73%	25%	1%	77%	97%	45
Revenio Group	287	9,194	33%	55%	13%	75%	98%	47
Robit	136	2,170	73%	6%	21%	81%	96%	49
Rovio Entertainment	715	10,315	20%	10%	70%	77%	96%	50
Saga Furs C	36	3,575	52%	42%	6%	79%	79%	55
Sampo A	25,183	108,602	26%	11%	63%	67%	92%	58
Sanoma	1,762	20,391	53%	28%	19%	64%	95%	55
Scanfil	272	5,224	27%	71%	2%	75%	94%	52
Sievi Capital	96	1,668	83%	15%	2%	77%	95%	50
Sili Solutions	77	4,276	47%	43%	9%	79%	98%	43
Silmäasema	94	5,624	59%	23%	18%	73%	97%	56
Solteq	30	2,278	59%	38%	2%	77%	96%	50
Soprano	8	1,106	44%	56%	0%	80%	96%	48
Sotkamo Silver	38	9,367	32%	64%	5%	87%	97%	44
SRV Group	218	7,165	47%	51%	2%	76%	96%	54
SSAB A	180	23,701	76%	21%	2%	70%	94%	57
SSAB B	856	28,988	75%	23%	2%	72%	94%	56
SSH Comm. Security	68	4,821	28%	64%	8%	81%	96%	48
Stockmann A	135	8,787	78%	21%	1%	51%	84%	59
Stockmann B	175	42,899	60%	26%	14%	39%	88%	60
Stora Enso A	2,328	7,715	56%	2%	42%	65%	94%	57
Stora Enso R	8,052	32,123	17%	4%	78%	68%	94%	57
Suomen Hoivatilat	185	8,237	50%	38%	12%	78%	98%	44
Suominen	305	4,140	63%	11%	26%	74%	96%	51
Taaleri	293	3,924	40%	49%	12%	79%	98%	46
Talenom	87	2,292	39%	61%	0%	83%	99%	42
Technopolis	668	9,154	48%	16%	36%	76%	97%	49
Tecnotree	9	5,694	33%	61%	6%	79%	93%	51
Teleste	125	5,612	69%	24%	7%	75%	94%	54

Share class	Market value, mill. €	# privately registered investors	Proportion of shares owned by			Proportion of individual investors who are		Mean age
			Domestic investors		Foreign investors	Men	Finnish sp.	
			Institutions	Individuals				
Telia	1,548	119,160	53%	42%	5%	67%	93%	55
Terveystalo	1,139	14,202	57%	6%	37%	73%	97%	52
Tieto	1,906	16,501	27%	11%	63%	67%	92%	56
Tikkurila	818	20,121	41%	11%	47%	68%	93%	57
Tokmanni Group	427	14,319	68%	15%	17%	76%	96%	50
Trainers' House	11	5,229	29%	70%	0%	76%	95%	51
Tulikivi A	10	4,902	30%	63%	7%	76%	95%	53
UPM-Kymmene	13,700	89,099	13%	15%	71%	62%	90%	57
Uponor	1,295	19,194	51%	17%	31%	72%	93%	55
Vaisala A	685	7,830	42%	35%	23%	65%	94%	55
Valmet	2,464	45,889	36%	14%	50%	66%	91%	57
Valoe	4	7,056	51%	30%	19%	84%	96%	48
Viking Line	175	3,501	50%	46%	4%	65%	43%	56
Wulff Group	11	736	29%	70%	2%	77%	94%	51
Wärtsilä	10,335	39,881	26%	18%	56%	62%	84%	57
YIT	859	43,649	50%	29%	21%	73%	95%	52
Yleiselektroniikka E	22	1,291	15%	85%	1%	79%	94%	53
<i>First North</i>								
Detection Technology	250	2,234	35%	13%	51%	82%	96%	48
Efecte	31	1,002	61%	37%	2%	85%	97%	49
Elite Varainhoito	15	628	63%	23%	15%	80%	98%	56
Fit Biotech	4	2,441	71%	26%	3%	85%	97%	43
Fondia	45	3,830	41%	59%	0%	78%	97%	43
Gofore	91	2,551	19%	80%	0%	81%	98%	46
Heeros	11	942	35%	60%	5%	84%	97%	43
Herantis Pharma	26	890	66%	24%	9%	75%	93%	50
Loudspring	49	3,816	27%	44%	29%	82%	97%	40
Nexstim	26	2,099	13%	13%	74%	85%	96%	44
Next Games	159	4,136	19%	55%	26%	83%	96%	45
Nixu	79	3,133	34%	52%	14%	81%	98%	43
Ahola Transport	10	297	93%	5%	2%	89%	86%	48
Piippo	9	460	6%	94%	0%	81%	96%	49
Privanet Group	43	2,078	62%	33%	5%	83%	97%	49
Remedy Entertainment	78	4,176	4%	77%	19%	85%	98%	41
Savo-Solar	8	2,613	6%	31%	63%	86%	97%	42
Titanium	57	4,621	18%	82%	0%	83%	99%	45
United Bankers	56	782	59%	36%	5%	76%	87%	51
Verkkokauppa.com	319	6,123	28%	56%	16%	83%	97%	40
Vincit	78	3,397	25%	55%	20%	80%	98%	42
Zeeland Family	10	769	35%	64%	1%	84%	98%	45

APPENDIX 2. Share of total market capitalization by investor group at the beginning of the year, 1995-2018

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	
Domestic investors																									
Institutions	52.1 %	52.4 %	47.9 %	42.0 %	37.4 %	27.2 %	18.5 %	20.8 %	25.3 %	29.6 %	31.1 %	31.2 %	30.9 %	27.9 %	30.6 %	36.3 %	38.4 %	41.0 %	40.5 %	37.1 %	35.3 %	33.3 %	33.5 %	34.5 %	
Individuals	15.2 %	13.9 %	13.6 %	13.6 %	9.2 %	7.8 %	7.5 %	7.9 %	9.1 %	11.1 %	12.6 %	11.9 %	12.5 %	10.3 %	12.4 %	16.2 %	17.3 %	18.1 %	18.7 %	17.6 %	16.7 %	16.9 %	16.7 %	16.2 %	
Foreign investors	32.6 %	33.7 %	38.5 %	44.4 %	53.4 %	65.1 %	73.9 %	71.3 %	65.7 %	59.3 %	56.3 %	57.0 %	56.6 %	61.8 %	57.0 %	47.5 %	44.3 %	40.9 %	40.8 %	45.3 %	48.0 %	49.8 %	49.9 %	49.4 %	
Totals	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	

APPENDIX 3. Number of shareholders at the beginning of the year, 1995-2018

The numbers are not cumulative. Therefore, for example, in 2018 there were 263 + 223 = 486 investors with a portfolio worth at least 5 million euros.

Portfolio value, mill. €	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
<0.01	410,457	426,537	393,285	418,024	462,727	543,990	577,948	607,670	614,752	580,579	550,736	508,015	465,700	449,101	509,794	500,317	481,527	525,440	521,189	492,982	470,019	445,829	447,783	454,356
0.01	62,785	58,459	72,368	91,492	111,644	171,689	149,253	124,701	111,177	128,869	140,664	152,503	162,272	157,879	123,871	164,752	180,037	163,566	173,454	192,778	189,365	201,830	199,347	203,418
0.1	3,929	3,604	5,410	7,274	8,875	16,372	12,567	10,814	9,526	11,549	13,790	16,836	19,228	18,692	11,366	18,382	22,641	17,951	20,055	23,800	23,562	25,000	26,519	27,011
0.2	1,167	1,089	1,676	2,283	3,075	5,344	4,519	3,762	3,155	3,673	4,312	5,588	6,787	6,653	3,662	6,143	8,180	5,817	6,923	8,560	8,416	9,354	9,918	10,272
0.3	480	445	760	1,081	1,443	2,866	2,410	1,891	1,515	1,701	2,089	2,758	3,329	3,435	1,721	3,013	3,936	2,824	3,272	4,077	4,059	4,474	5,044	5,283
0.4	257	269	419	606	917	1,648	1,529	1,197	885	1,030	1,162	1,527	1,918	1,901	985	1,702	2,294	1,578	1,914	2,326	2,380	2,697	2,985	3,061
0.5	204	180	251	368	532	1,181	1,039	769	631	664	772	991	1,287	1,294	605	1,041	1,456	958	1,145	1,550	1,488	1,726	1,898	1,964
1	192	178	298	456	684	1,794	1,669	1,097	735	817	901	1,152	1,469	1,595	703	1,140	1,606	1,059	1,286	1,708	1,643	1,917	2,193	2,341
2	53	55	90	116	182	605	504	315	205	206	216	312	393	450	182	319	451	283	375	433	415	525	586	620
3	31	17	43	54	80	283	258	153	95	103	101	139	196	177	95	130	198	143	151	200	191	217	285	292
4	9	13	17	29	49	130	133	73	52	54	67	70	101	125	56	81	106	75	106	116	107	122	145	165
5	19	27	36	71	100	241	210	155	98	118	117	162	206	202	102	162	199	153	155	186	184	212	262	263
10	9	11	24	41	48	161	160	89	58	69	82	102	140	142	55	108	151	92	116	140	141	163	203	223
Totals	479,592	490,884	474,677	521,895	590,356	746,304	752,199	752,686	742,884	729,432	715,009	690,155	663,026	641,646	653,197	697,290	702,782	719,939	730,141	728,856	701,970	694,066	697,168	709,269

APPENDIX 4. Cumulative proportion owned by the wealthiest *n* % of investors at the beginning of the year, 1995-2018

Gini coefficients have been calculated both for share investors and for the population.

Cumulative proportion owned by the wealthiest <i>n</i> % of investors																								
Percentile	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
0.01	7.6 %	8.4 %	9.1%	10.7 %	9.6 %	14.1%	15.0 %	13.9 %	14.8 %	17.6 %	16.6 %	15.4 %	14.8 %	14.4 %	13.6 %	14.9 %	14.2 %	12.5 %	11.1%	11.2 %	11.9 %	12.1%	12.6 %	12.5 %
0.1	20.0 %	21.7 %	22.7 %	25.2 %	24.3 %	29.6 %	31.7 %	30.0 %	29.7 %	31.4 %	29.9 %	28.8 %	28.7 %	28.1%	27.2 %	27.9 %	27.2 %	25.7 %	24.5 %	24.0 %	24.5 %	24.6 %	25.7 %	26.3 %
0.5	35.0 %	37.0 %	37.9 %	40.3 %	40.6 %	46.8 %	49.9 %	47.4 %	45.9 %	45.8 %	43.7 %	42.8 %	42.8 %	42.7 %	41.4 %	41.3 %	40.8 %	39.5 %	38.7 %	37.7 %	37.9 %	38.1%	39.6 %	40.2 %
1	43.4 %	45.5 %	46.3 %	48.5 %	49.4 %	55.3 %	58.7 %	56.2 %	54.4 %	53.5 %	51.4 %	50.5 %	50.6 %	50.8 %	49.3 %	48.9 %	48.5 %	47.3 %	46.7 %	45.6 %	45.8 %	46.0 %	47.5 %	48.1%
2	53.1%	55.3 %	56.0 %	57.8 %	59.0 %	63.8 %	67.4 %	65.2 %	63.5 %	62.1%	60.1%	59.4 %	59.6 %	59.9 %	58.4 %	57.8 %	57.6 %	56.4 %	56.0 %	55.0 %	55.1%	55.3 %	56.7 %	57.3 %
3	59.3 %	61.4 %	62.2 %	63.7 %	64.8 %	68.8 %	72.2 %	70.4 %	69.1%	67.5 %	65.6 %	65.0 %	65.2 %	65.7 %	64.1%	63.5 %	63.5 %	62.3 %	62.0 %	61.0 %	61.1%	61.3 %	62.7 %	63.2 %
4	64.0 %	66.0 %	66.7 %	68.0 %	68.9 %	72.3 %	75.5 %	74.1%	73.1%	71.4 %	69.7 %	69.2 %	69.4 %	69.9 %	68.4 %	67.8 %	67.8 %	66.7 %	66.5 %	65.6 %	65.7 %	65.7 %	67.1%	67.6 %
5	67.7 %	69.7 %	70.3 %	71.3 %	72.1%	75.0 %	78.0 %	76.8 %	76.2 %	74.4 %	72.9 %	72.5 %	72.6 %	73.1%	71.7 %	71.2 %	71.3 %	70.2 %	70.1%	69.2 %	69.2 %	69.3 %	70.6 %	71.0 %
6	70.7 %	72.6 %	73.3 %	74.1%	74.6 %	77.2 %	80.0 %	79.0 %	78.6 %	76.8 %	75.5 %	75.1%	75.3 %	75.7 %	74.4 %	73.9 %	74.1%	73.1%	73.0 %	72.1%	72.2 %	72.2 %	73.4 %	73.8 %
7	73.3 %	75.1%	75.7 %	76.3 %	76.7 %	79.1%	81.6 %	80.8 %	80.6 %	78.9 %	77.7 %	77.4 %	77.5 %	77.9 %	76.7 %	76.3 %	76.5 %	75.5 %	75.4 %	74.6 %	74.6 %	74.6 %	75.8 %	76.2 %
8	75.5 %	77.3 %	77.8 %	78.3 %	78.5 %	80.7 %	83.0 %	82.4 %	82.3 %	80.6 %	79.6 %	79.3 %	79.4 %	79.8 %	78.6 %	78.3 %	78.5 %	77.5 %	77.5 %	76.8 %	76.8 %	76.7 %	77.9 %	78.2 %
9	77.4 %	79.1%	79.6 %	80.0 %	80.0 %	82.1%	84.2 %	83.7 %	83.8 %	82.2 %	81.2 %	80.9 %	81.1%	81.4 %	80.3 %	80.0 %	80.3 %	79.3 %	79.3 %	78.6 %	78.6 %	78.5 %	79.6 %	80.0 %
10	79.1%	80.7 %	81.3 %	81.5 %	81.4 %	83.3 %	85.3 %	84.8 %	85.1%	83.5 %	82.6 %	82.4 %	82.5 %	82.8 %	81.8 %	81.5 %	81.8 %	80.9 %	80.9 %	80.3 %	80.2 %	80.1%	81.2 %	81.5 %
20	89.2 %	90.2 %	90.7 %	90.5 %	89.8 %	90.2 %	91.5 %	91.6 %	92.5 %	91.2 %	90.9 %	90.8 %	90.8 %	91.0 %	90.4 %	90.5 %	91.0 %	90.2 %	90.3 %	90.0 %	89.9 %	89.6 %	90.4 %	90.6 %
30	93.9 %	94.5 %	94.9 %	94.7 %	93.9 %	93.4 %	94.4 %	94.6 %	95.7 %	94.7 %	94.6 %	94.5 %	94.5 %	94.6 %	94.2 %	94.5 %	94.9 %	94.3 %	94.4 %	94.3 %	94.2 %	93.9 %	94.5 %	94.5 %
40	96.4 %	96.9 %	97.1%	96.9 %	96.2 %	95.3 %	96.2 %	96.3 %	97.3 %	96.5 %	96.5 %	96.5 %	96.5 %	96.5 %	96.3 %	96.6 %	97.0 %	96.5 %	96.6 %	96.6 %	96.5 %	96.2 %	96.6 %	96.7 %
50	98.0 %	98.3 %	98.4 %	98.2 %	97.6 %	96.8 %	97.3 %	97.4 %	98.2 %	97.6 %	97.7 %	97.6 %	97.6 %	97.7 %	97.6 %	97.9 %	98.1%	97.8 %	97.9 %	97.9 %	97.8 %	97.6 %	97.9 %	98.0 %
60	98.9 %	99.1%	99.2 %	99.0 %	98.6 %	98.3 %	98.4 %	98.3 %	98.8 %	98.4 %	98.4 %	98.4 %	98.4 %	98.5 %	98.4 %	98.7 %	98.8 %	98.7 %	98.7 %	98.8 %	98.7 %	98.7 %	98.9 %	98.9 %
70	99.5 %	99.6 %	99.6 %	99.5 %	99.4 %	99.2 %	99.2 %	99.1%	99.3 %	99.1%	99.1%	99.2 %	99.2 %	99.2 %	99.2 %	99.4 %	99.4 %	99.4 %	99.4 %	99.4 %	99.4 %	99.4 %	99.5 %	99.5 %
80	99.8 %	99.8 %	99.8 %	99.8 %	99.7 %	99.7 %	99.7 %	99.7 %	99.7 %	99.7 %	99.7 %	99.7 %	99.7 %	99.7 %	99.7 %	99.8 %	99.8 %	99.8 %	99.8 %	99.8 %	99.8 %	99.8 %	99.8 %	99.8 %
90	99.95%	99.96%	99.96%	99.94%	99.94%	99.94%	99.93%	99.94%	99.94%	99.93%	99.93%	99.93%	99.94%	99.94%	99.95%	99.95%	99.96%	99.96%	99.96%	99.96%	99.96%	99.96%	99.97%	99.97%
<i>Gini coefficient</i>																								
Investors	0.860	0.870	0.874	0.874	0.869	0.873	0.888	0.885	0.893	0.881	0.876	0.875	0.875	0.877	0.870	0.873	0.876	0.869	0.870	0.867	0.865	0.863	0.871	0.874
Population	0.987	0.987	0.988	0.987	0.985	0.981	0.983	0.983	0.984	0.983	0.983	0.983	0.984	0.985	0.984	0.983	0.983	0.982	0.982	0.982	0.982	0.982	0.983	0.983

APPENDIX 5. Women's share of shareholders and share wealth at the beginning of the year, 1995-2018

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Shareholders	45.8%	45.0%	45.0%	44.2%	44.0%	46.4%	45.5%	45.0%	44.9%	44.8%	44.9%	44.9%	44.7%	44.6%	44.0%	43.4%	43.2%	42.8%	42.4%	41.9%	42.3%	42.1%	41.7%	41.3%
Share wealth	38.6%	37.9%	37.3%	36.5%	36.4%	35.2%	35.5%	36.0%	33.6%	31.7%	31.2%	31.3%	31.3%	32.0%	30.4%	28.5%	28.3%	29.0%	29.5%	29.1%	29.4%	29.6%	29.2%	29.1%

APPENDIX 6. Mean age of investors and the population at the beginning of the year, 1995-2018

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Investors	45.0	45.8	46.5	47.3	48.0	49.3	49.6	50.1	50.7	51.4	52.0	52.7	53.2	53.8	53.9	54.0	54.3	54.3	54.5	54.7	55.4	55.6	55.7	55.6
Population	37.6	37.8	38.0	38.2	38.4	38.7	38.9	39.1	39.4	39.6	39.8	40.0	40.2	40.4	40.6	40.8	41.0	41.1	41.3	41.4	41.6	41.8	42.0	42.2

APPENDIX 7. Individuals' share wealth by province at the beginning of the year, 1995-2018

Province	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	
Uusimaa, excl. Gr. Helsinki	7.7 %	8.1 %	8.6 %	9.1 %	8.7 %	9.0 %	8.7 %	8.5 %	7.2 %	7.2 %	7.4 %	7.6 %	7.6 %	7.7 %	7.5 %	7.6 %	7.9 %	8.1 %	8.4 %	8.4 %	8.9 %	9.0 %	8.8 %	8.9 %	
Greater Helsinki Area	46.6 %	46.3 %	45.4 %	44.8 %	44.9 %	50.4 %	50.6 %	49.2 %	46.7 %	46.9 %	45.8 %	45.8 %	46.5 %	45.7 %	44.8 %	43.9 %	43.0 %	42.9 %	42.4 %	41.9 %	42.3 %	42.9 %	42.9 %	42.9 %	
Varsinais-Suomi	8.9 %	8.6 %	9.9 %	10.4 %	8.9 %	6.6 %	6.8 %	7.0 %	7.1 %	6.8 %	7.2 %	7.4 %	7.3 %	7.4 %	7.6 %	7.5 %	7.7 %	7.9 %	8.3 %	8.4 %	8.4 %	8.2 %	8.1 %	8.0 %	
Satakunta	2.6 %	2.6 %	2.6 %	2.6 %	2.3 %	1.9 %	1.9 %	1.9 %	2.1 %	2.2 %	2.3 %	2.4 %	2.6 %	2.4 %	2.5 %	2.6 %	2.6 %	2.6 %	2.7 %	2.7 %	2.7 %	2.6 %	2.6 %	2.6 %	
Kanta-Häme	1.7 %	1.6 %	1.6 %	1.6 %	1.6 %	1.4 %	1.5 %	1.6 %	1.5 %	1.5 %	1.5 %	1.6 %	1.6 %	1.6 %	1.5 %	1.6 %	1.6 %	1.6 %	1.7 %	1.7 %	1.7 %	1.6 %	1.6 %	1.7 %	
Pirkanmaa	6.9 %	6.7 %	6.4 %	6.0 %	7.8 %	7.0 %	6.9 %	6.8 %	6.6 %	6.2 %	6.3 %	6.4 %	6.4 %	6.6 %	6.6 %	6.5 %	6.6 %	6.6 %	6.7 %	6.7 %	6.7 %	6.8 %	6.7 %	6.8 %	
Päijät-Häme	2.5 %	2.5 %	2.5 %	2.5 %	2.3 %	1.8 %	1.9 %	2.2 %	2.2 %	2.1 %	2.2 %	2.2 %	2.4 %	2.6 %	2.7 %	2.6 %	2.5 %	2.7 %	2.7 %	2.6 %	2.5 %	2.5 %	2.4 %	2.4 %	
Kymenlaakso	1.7 %	1.6 %	1.6 %	1.5 %	1.5 %	1.3 %	1.3 %	1.4 %	1.4 %	1.4 %	1.4 %	1.5 %	1.5 %	1.5 %	1.5 %	1.5 %	1.5 %	1.5 %	1.6 %	1.6 %	1.7 %	1.7 %	1.6 %	1.6 %	
Etelä-Karjala	1.5 %	1.4 %	1.3 %	1.3 %	1.3 %	1.1 %	1.2 %	1.2 %	1.3 %	1.2 %	1.3 %	1.3 %	1.3 %	1.3 %	1.3 %	1.3 %	1.4 %	1.4 %	1.4 %	1.4 %	1.4 %	1.3 %	1.3 %	1.3 %	
Etelä-Savo	1.3 %	1.2 %	1.2 %	1.2 %	1.2 %	1.1 %	1.1 %	1.2 %	1.2 %	1.2 %	1.3 %	1.3 %	1.3 %	1.3 %	1.3 %	1.3 %	1.4 %	1.4 %	1.4 %	1.4 %	1.4 %	1.3 %	1.3 %	1.3 %	
Pohjois-Savo	1.9 %	2.1 %	2.1 %	2.1 %	2.0 %	1.6 %	1.7 %	1.8 %	2.1 %	2.3 %	2.7 %	2.9 %	2.8 %	2.9 %	2.5 %	2.6 %	2.8 %	2.6 %	2.6 %	2.8 %	2.8 %	3.0 %	3.2 %	3.2 %	
Pohjois-Karjala	1.2 %	1.2 %	1.2 %	1.2 %	1.3 %	1.0 %	1.0 %	1.1 %	1.3 %	1.3 %	1.5 %	1.5 %	1.3 %	1.4 %	1.4 %	1.3 %	1.4 %	1.5 %	1.4 %	1.4 %	1.3 %	1.3 %	1.3 %	1.3 %	
Keski-Suomi	2.2 %	2.0 %	1.9 %	1.8 %	1.9 %	2.0 %	1.9 %	2.0 %	2.1 %	2.2 %	2.4 %	2.4 %	2.2 %	2.2 %	2.3 %	2.3 %	2.4 %	2.4 %	2.4 %	2.4 %	2.4 %	2.3 %	2.3 %	2.2 %	2.2 %
Etelä-Pohjanmaa	1.8 %	1.9 %	1.9 %	2.0 %	1.8 %	1.4 %	1.5 %	1.6 %	1.8 %	1.9 %	2.0 %	2.2 %	2.2 %	2.2 %	2.5 %	2.5 %	2.6 %	2.5 %	2.5 %	2.5 %	2.4 %	2.3 %	2.3 %	2.3 %	
Pohjanmaa	2.7 %	2.7 %	2.7 %	2.6 %	2.6 %	2.4 %	2.6 %	2.7 %	2.6 %	2.5 %	2.6 %	2.7 %	2.8 %	2.8 %	2.9 %	2.8 %	3.0 %	3.1 %	3.2 %	3.4 %	2.9 %	2.8 %	2.8 %	2.8 %	
Keski-Pohjanmaa	0.8 %	0.7 %	0.6 %	0.5 %	0.5 %	0.4 %	0.4 %	0.4 %	0.5 %	0.5 %	0.5 %	0.5 %	0.5 %	0.5 %	0.5 %	0.6 %	0.6 %	0.6 %	0.6 %	0.6 %	0.6 %	0.6 %	0.6 %	0.5 %	
Pohjois-Pohjanmaa	2.5 %	2.4 %	2.3 %	2.4 %	3.1 %	3.1 %	2.5 %	2.5 %	4.6 %	5.7 %	4.9 %	4.1 %	3.6 %	3.6 %	3.7 %	3.9 %	3.7 %	3.8 %	3.7 %	4.3 %	4.3 %	4.0 %	4.4 %	4.6 %	
Kainuu	0.6 %	0.6 %	0.5 %	0.6 %	0.5 %	0.5 %	0.5 %	0.5 %	0.5 %	0.5 %	0.5 %	0.5 %	0.5 %	0.5 %	0.5 %	0.5 %	0.5 %	0.5 %	0.5 %	0.5 %	0.5 %	0.5 %	0.5 %	0.5 %	
Lappi	1.4 %	1.3 %	1.2 %	1.2 %	1.1 %	1.1 %	1.0 %	1.0 %	1.1 %	1.1 %	1.2 %	1.2 %	1.2 %	1.2 %	1.2 %	1.4 %	1.4 %	1.3 %	1.3 %	1.3 %	1.3 %	1.2 %	1.3 %	1.2 %	
Ahvenanmaa	1.3 %	1.8 %	1.8 %	1.8 %	1.7 %	1.9 %	2.0 %	2.3 %	2.7 %	2.5 %	2.3 %	1.9 %	1.8 %	2.1 %	2.5 %	2.1 %	1.7 %	1.6 %	1.4 %	1.3 %	1.3 %	1.3 %	1.2 %	1.1 %	
Unknown	2.5 %	2.5 %	2.5 %	2.7 %	2.9 %	3.0 %	3.3 %	3.2 %	3.1 %	2.8 %	2.7 %	2.6 %	2.7 %	2.7 %	2.6 %	3.6 %	3.9 %	3.3 %	3.1 %	2.7 %	2.8 %	2.7 %	2.7 %	2.8 %	
Totals	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %	

APPENDIX 8. Number of stocks in portfolio by institutional status at the beginning of the year, 1995-2018

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Institutions	3.31	3.29	3.15	3.01	2.97	2.76	3.03	3.06	3.13	3.19	3.23	3.35	3.44	3.46	3.80	3.81	3.99	4.02	4.08	4.18	4.19	4.19	4.25	4.56
Individuals	2.04	2.07	1.96	2.06	2.08	2.15	2.32	2.38	2.43	2.47	2.54	2.65	2.76	2.74	2.95	3.15	3.31	3.39	3.45	3.57	3.62	3.66	3.73	3.85